APRIL 1990
QUARTERLY SAMPLING REPORT
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CALIFORNIA

Prepared for:

SOUTHERN CALIFORNIA CHEMICAL
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Prepared by:

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June 19, 1990

SOUTHERN CALIFORNIA CHEMICAL

A DIVISION OF CP CHEMICALS, INC.

8851 DICE ROAD • SANTA FE SPRINGS, CALIFORNIA 90670-0118

June 21, 1990

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California Regional Water Quality Control Board
Los Angeles Region
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Facilities Management
Toxic Substances Control Division, Region 3
Department of Health Services
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Dear Messrs. Yacoub and Simpson:

Enclosed is the April 1990 quarterly sampling report for Southern California Chemical, Santa Fe Springs facility. The report includes results of analyses of water samples and water level measurements obtained April 9-13, 1990 from the on-site monitoring wells.

We trust the information in the report meets your needs at this time. Should you have any questions, please contact us.

Very truly yours,

E E Vigil

E.E. Vigil
Environmental and Safety Manager

EEV:ca:RWQCBQTGW
Enclosure

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1.0 INTRODUCTION

This report summarizes the sixteenth RCRA quarterly ground water monitoring sampling and analyses period at Southern California Chemical (SCC), Santa Fe Springs, California. Contained herein are the results of laboratory analyses of ground water samples and water level measurements obtained during the period April 9 to April 13, 1990.

The purpose of the ground water sampling program, which began in February 1985, is to monitor ground water quality and establish a database of the compounds in the ground water beneath the site. The primary goals of the program are (a) to assess the location and concentration of chromium and cadmium contamination, (b) to detect and evaluate water quality changes, and (c) to characterize background water quality.

In addition to the data obtained during the April 1990 sampling, this report contains plot plans showing contaminant distribution (Appendix A) and a summary of all previous sampling data (Appendix B). Copies of the original laboratory results are included in Appendices C and D. Chain-of-custody records for the April 1990 sampling are included in Appendix E.

2.0 MONITOR WELL SAMPLING

Ground water sampling, utilizing existing on-site monitoring wells, was conducted by CDM field personnel during the period of April 9 to April 13, 1990. Field activities were performed in general accordance with the ground water sampling protocol as outlined in Section 4.3.3 of the unapproved, RCRA Facility Investigation (RFI) Work Plan (CDM, June 1990). Prior to the submittal of the RFI Work Plan for regulatory agency review and approval, the unapproved Kleinfelder Quality Assurance Project Plan (QAPP, May 1988) was used as the primary ground water sampling guidance document.

Twelve monitor wells were sampled as part of this program (Figure A-1, Appendix A). Of these, 11 are screened in the upper portion of the Hollydale aquifer. The 12th well, MW-4A, is screened in the lower portion of the Hollydale aquifer. An additional monitoring well, MW-06A, historically has not been sampled for ground water analysis since it is a dry well. The well is screened in the lower portion of the uppermost aquifer, the Gage Aquifer, which is dry below the site.

As outlined in the Kleinfelder QAPP, certain analyses have been performed on a quarterly schedule, while others have recently been done on a biannual schedule, coinciding with quarterly sampling (effective September 1988). Ground water sampling, utilizing monitoring wells MW-1 through MW-6B, was initiated at the site by J. H. Kleinfelder and Associates (Kleinfelder) at the end of February, 1985. Six additional wells (MW-4A and MW-7 through MW-11) were installed at the site in July 1985, thereby increasing the total number of active wells to 12. Quarterly sampling of all 12 wells was initiated in March 1986. Commencing with the January 1989 sampling event, Camp Dresser & McKee Inc. (CDM) has been responsible for all ground water monitoring activities at the facility. A detailed listing of analytical parameters per sampling event has been provided in Table 2-1.

As in the past, the Regional Water Quality Control Board (RWQCB), and California Department of Health Services (DHS) were notified prior to commencement of sampling activities and were provided the opportunity to observe sampling and to collect duplicate and/or split samples. No

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
3/85	X (includes Cd & total Cr)	X	QUAD	Cu&ZN*	X*	X	X*	—	Sampled wells MW1,2,3,4, 5,&6B. Sulfide, nickel and * requested by DOHS and RWQCB.
7/85	—	—	QUAD	Cd,Cr	X	—	X	—	Sampled wells MW-4A,7,8,9, 10 and 11.
3/86	X	X	QUAD	Cu&Zn	X	X	X	—	Sampled 12 wells (MW1,2, 3,4,4A,5,6B,7,8,9,10 and 11).
7/86	—	—	QUAD	X	X	X	X	624	Sampled all 12 wells (as previous).
9/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
12/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
3/87	—	—	QUAD	X	X	X	X	601/602	Sampled 11 wells, not 4A
7/87	—	—	QUAD	X	X	X	X	601/602	After July 1987, all 12 wells were sampled during each event.
10/87	—	—	QUAD	X	X	X	X	601/602	
2/88	—	—	QUAD	X	X	X	X	601/602	
6/88	—	—	X (not QUAD)	X	X	X	X	601/602	Performed statistical analysis (t-test) on Indicator Parameters (IPs).

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
9/88	—	—	—	X	X	X	X	601/602	IPs & volatile organics from MW1, 2,4A, 5, 6, 7 analyzed semi-annually in June/Dec.
1/89	—	—	QUAD	X	X	X	X	601/602	After January 1989, volatile organics analyzed for all 12 wells.
4/89	—	—	—	X	X	X	X	601/602	
7/89	—	—	QUAD	X	X	X	X	601/602	Performed statistical analysis of January through July 1989 data (IPs, total and hexavalent chromium).
10/89	—	—	—	X	X	X	X	601/602	
1/90	—	—	QUAD	X	X	X	X	601/602	
4/90	—	—	—	X	X	X	X	601/602	

Appendix III Parameters - As, Ba, Cd, Cr, F, Pb, Hg, N, Se, Ag, Endin, Lindane, Methoxychlor, Toxaphene, 2,4,D, 2,4,5TP (Silvex), Radium, Gross Alpha & Beta, turbidity, coliform bacteria

Water Quality Parameters. - Cl, Fe, Mn, Phenols, Na, SO_4

Indicator Parameters (IP) - TOX, TOC, pH, EC

624 = Volatile organics analysis

601/602 - Purgeable halocarbons/aromatics analysis

representatives from either agency were present at any time during sampling. In addition to these agencies, EPA was also notified of the sampling program. Similarly, no representatives from that agency were present at anytime during sampling.

2.1 Sampling Procedure

To ensure continuity with previous quarterly samplings, field sampling and decontamination procedures, as detailed in the RFI Workplan, were based on procedures established by Kleinfelder in their unapproved QAPP with some minor modifications. Sampling practices included efforts to detect floating product and hydrocarbon vapors at each well, measurement of the static water level and total depth of each well for calculating pre-sampling evacuation volumes, purging and sampling of ground water for laboratory analysis, decontamination of sampling equipment, and correct handling of sample containers. Deviations from the Kleinfelder QAPP were generally limited to implementation and decontamination of the submersible sampling pump systems. This was necessitated by a change in design of the pump system beginning with the April 1989 sampling period. Details of these deviations have been discussed in prior Quarterly Sampling Reports.

2.1.1 Detection of Organic Vapors and Immiscible Layers

Due to the known presence of organic compounds in the ground water in the Hollydale aquifer, efforts were made to determine if organic well vapors and immiscible floating product layers could be detected in the field. Prior to opening a monitor well for sampling, the air immediately above the well was monitored for organic vapors through the use of a photoionization detector (PID) equipped with a 10.0 eV lamp. The head space of each well was checked for volatile organic vapors by inserting the intake tube of the PID into the well head immediately after removing the monitoring well security plate and opening the casing cap. The maximum and average reading values for each well were recorded in the field log book.

The depth to static water level was measured to the nearest 0.01 foot using a decontaminated electric water level sounder. These data were subsequently

input in calculations for determining wetted casing volumes and for use in determining ground water elevations at the facility.

A decontaminated, 2-inch diameter, clear teflon bailer, equipped with a bottom ball-check valve, was lowered and immersed into the ground water approximately half its length and brought up to the surface. Although none were observed, field personnel were prepared to record the thickness of floating product or note any iridescence on the water surface.

2.1.2 Purge Volume Determination

The total depth of each monitoring well was measured by lowering the water level sounder line until the sounder weights could be felt contacting the well bottom. This value was compared with the total depth of the well casing, as it had been constructed, to determine the amount of sediment fill present in each well. One wetted casing volume was then calculated by using the following formula:

$$1v = \pi \times r^2 \times L$$

where: $1v$ = one wetted casing volume
L = length of wetted casing
π = 3.142
r = inside radius of the casing

2.1.3 Ground Water Purging and Sampling

A decontaminated 40-inch bladder pump consisting of a teflon bladder fitted inside a stainless steel pump body was lowered to the approximate middle of the wetted, open screened casing of each well, where feasible. Coaxial tubing wherein the sample discharge line was encased within the air supply line has been used in previous sampling events and was used on all wells during the April 1990 sampling except for Well MW-5. Because of a leaking air supply line, the coaxial tubing on one of the pumps was replaced with separate teflon-coated air supply and sample discharge lines which were used on Well MW-5 only. To ensure quality control on decontamination of the assembly, all tubing surfaces coming into contact with the ground water were teflon-coated. In addition, the 4-inch diameter wells

(MW-4A and MW-9) were evacuated more effectively and efficiently by using the bladder pump's ability to be extended from a 40-inch to a 72-inch assembly and used as an air lift pump. A reduction to the 40-inch bladder assembly and final well evacuation was done prior to extracting samples for laboratory analysis.

Field parameters (pH, specific conductance [EC], temperature, salinity, and visual characteristics) were monitored and recorded at appropriate intervals during the purging of ground water from each well. Prior to evacuating the ground water, the EC and pH meters were calibrated and checked with appropriate calibration solutions. Ground water was purged until the parameters had stabilized and a minimum of three saturated well casing volumes had been evacuated. All purge water collected from each well was contained and labeled in SCC-supplied 55-gallon barrels for treatment and disposal by SCC at the on-site wastewater treatment facilities.

Ground water samples were discharged directly into previously labeled sample bottles which were then placed inside plastic zip-lock baggies and placed in an ice-cooled chest. Samples for metals analyses (cadmium, copper, zinc and total chromium [Cd, Cu, Zn and Cr, respectively]) are usually field filtered with a sterile, 0.45-micron, in-line filter as the appropriate bottles are filled. During the first two days of the April sampling, however, metal samples were not field filtered, but were lab-filtered instead (Wells MW-1, -2, -3, -4, and -11). The samples were field filtered the last two days of sampling. Precautions were taken to ensure that no headspace or bubbles were present in sample vials for volatile organic compound analysis.

Ground water samples were collected in the following sequence as determined in the Kleinfelder QAPP:

- EPA Method 601/602
- Metals (Cd, Cu, Zn, Cr)
- Hexavalent Chromium
- Chloride/Nitrate

Ground water sample bottles were numbered using the following format:

(e.g.) SCC-MW01-007

Where:

SCC - designates site acronym
MW01 - designates sample location number (MW = Monitoring Well)
EB - designates equipment blank sample
SP - designates spiked samples
TB - designates travel blanks
DIW - designates de-ionized water sample
007 - designates sequential sample number (per sampling event)

This was the sixth round of sampling conducted by CDM, however, since a 003 sequence number had been assigned to several quality assurance samples during the April 1989 sampling event, a 007 sequence number was assigned to all ground water samples collected during this round. Sample label information included date and time of sampling, CDM sample number, and analytical parameters.

2.1.4 Sample Handling

All sample containers that were collected from each well were accompanied by chain-of-custody forms that indicated the label information as well as the responsible person during each step of the transportation process. All samples were hand-delivered to the appropriate laboratories on the day that they were collected, and a copy of the chain-of-custody for that day was retained by CDM field personnel. The laboratories were notified at the time of delivery that one or more Cr(VI) sample(s) were contained in the shipment to ensure that the samples would be analyzed within the prescribed 24-hour holding period.

2.2 Equipment Decontamination Procedures

The following sections describe the procedures utilized to decontaminate ground water sampling equipment.

2.2.1 Sampling Pump/Lines Decontamination

The bladder pump assembly and coaxial tubing were decontaminated to reduce the possibility of cross-contamination between monitoring wells. The first step in the decontamination procedure was to submerge the pump assembly into a decontaminated polyvinyl chloride (PVC) tube containing a soap (Alconox, laboratory-grade detergent) and water mixture and pump at least 2 gallons through the system. The PVC tube was then rinsed and filled with tap water, the pump assembly was once more submerged and at least 2 gallons was pumped through the system.

The final decontamination step was accomplished by submerging the pump into a decontaminated PVC tube containing DIW and pumping approximately 5 gallons of DIW through the system. During the collection of equipment blanks, an additional five gallons of DIW were pumped. A sample of the DIW was taken to perform confirmation analyses for comparison in the event of anomalous laboratory results.

This decontamination method differs from previous decontamination methods in which the steam cleaner was attached directly to the pump assembly via a quick coupler and the interior of the pump and discharge line were steam cleaned. Due to the high temperatures involved and subsequent distortion and failure of the teflow bladders, the soap and water wash followed by a tap water rinse and final DIW rinse was substituted.

The exterior of the discharge and air supply tubing was steam cleaned as well as the exterior of the reel holding the coaxial tubing. The decontamination of the exterior pump line was performed over a plastic waterproof tarp. The tarp was placed on a gently sloping surface and bermed up at the lower edges, allowing the decontamination water to flow away from the equipment being cleaned. The spent water was recovered and stored in 55-gallon drums for treatment by SCC in the facility's wastewater treatment system.

2.2.2 Accessory Sampling Equipment Decontamination

Accessory sampling equipment such as the teflon bailer and the water level sounder were decontaminated to prevent cross-contamination between the monitoring wells. The bailer and water level sounder were decontaminated first by washing in a bucket of soap and water, followed by a tap water rinse, followed by a final DIW rinse. Steam cleaning was not used on the bailer because, as mentioned in previous reports, the high temperatures would have deformed the bailer.

3.0 LABORATORY TESTING

Two laboratories were utilized as a quality control measure intended to ensure the accuracy of the laboratory analyses performed on the ground water samples. Analytical and duplicate testing was provided by Analytical Technologies, Inc. (ATI), San Diego, California. West Coast Analytical Service (WCAS) of Santa Fe Springs, California prepared spike samples that were submitted to ATI for assessment of analytical consistency. Spike sample preparation and analysis is discussed in Section 4.2.

During the April quarterly sampling event, a total of 23 water samples were submitted for laboratory analysis. Seventeen samples consisting of 12 monitor well (MW) samples, two duplicate monitor well samples (MW-04 and 10), and two equipment blanks (EB) were collected and submitted to ATI for analysis of purgeable halocarbons/ aromatics (601/602), cadmium, total and hexavalent chromium, copper, zinc, chloride and nitrate. A sample of the deionized water (DIW) used to make up the equipment blanks and for decontamination purposes was also submitted for analysis of the above parameters. Four travel blanks (TB) were also submitted to ATI for analysis of purgeable halocarbons/ aromatics. WCAS prepared a spiked sample (SP) for analysis of purgeable aromatics and metals by both ATI and WCAS.

The April 1990 ground water analytical results are discussed in Section 6.0 and summarized in Tables 6-1 through 6-3. Quality assurance analytical results (duplicates, equipment blanks, travel blanks, and spiked samples) are discussed in Section 4.0 and summarized in Tables 4-1 through 4-3. Historical Kleinfelder and CDM ground water analytical data are summarized in Appendix B. Individual analytical reports for April 1990 are located in Appendices C and D. Chain-of-custody records are located in Appendix E.

4.0 QUALITY ASSURANCE

To verify the accuracy and validity of analytical data resulting from laboratory testing, certain quality assurance procedures were implemented. These procedures included the use of duplicate samples, spiked samples, equipment blanks, travel blanks, and the use of chain-of-custody forms.

4.1 Duplicate Samples

Duplicate ground water samples from two of the twelve monitoring wells were submitted to ATI for analysis. Several procedural changes in QA protocols were implemented during the July 1989 sampling event. Prior to July 1989, up to four duplicate samples per sampling event had been submitted to the laboratory, with the collection of 1 duplicate sample to every three monitor well samples. Standard accepted practice is to submit one duplicate sample for every tenth sample, a ratio of 1 to 10. The previous frequency was determined to be excessive and was revised to reflect current accepted practice. All other subsequent duplicate samples have been collected at the 1 in 10 frequency.

Another change made during the July 1989 sampling event was the submittal of the monitor well samples and duplicate samples to only one laboratory. Previous sampling and analysis utilized a second laboratory to perform duplicate testing. Again, standard practice is to send duplicate samples to the laboratory performing the primary analysis, as a check on the laboratory's precision. During the April 1989 sampling, ENSECO was the primary laboratory, with CKY utilized to perform duplicate testing. It was not possible to resolve discrepancies and inconsistencies which existed in the duplicate analytical results because it could not be determined which analytical data was erroneous. For this reason, it was decided to submit all subsequent monitor well and duplicate samples to the same laboratory. ATI was used for the January 1990 sampling event.

During the April 1990 round of sampling, two duplicate samples were collected from monitoring wells MW-4 and MW-10. The duplicate samples from

wells MW-10 and MW-4 were submitted to the analytical laboratory as blind samples, and were designated MW-30 and MW-31, respectively, on the Chain of Custody forms. Monitor well MW-4 was selected because it generally yields the poorest quality ground water, and MW-10 was selected because of the detection of elevated levels of several purgeable halocarbon/aromatic compounds during the previous January 1990 sampling event. The results of the duplicate analyses have been compiled in Tables 4-1 through 4-3.

For both duplicate samples without exception, where purgeable halogenated/ aromatics, metals and other compounds were detected in the original sample, those same compounds were also detected in the duplicates. Purgeable halogenated compounds detected in the duplicate sample collected from MW-4 ranged from 6.7 (chloroform) to 28.5 (1,1-dichloroethene) percent greater than the original sample for an average difference of +14.6 percent. As shown in Table 5-1 of the RFI Work Plan, duplicate values which occur in the range $\pm$ 20 percent are acceptable. When comparing duplicate purgeable halocarbon results to the original results for Well MW-10, they are not in as close agreement, with duplicate results ranging from 104 percent greater than (1,1-dichloroethane) to 11 percent less than (1,1-dichloroethene) the original.

Ethylbenzene was detected in both the original and duplicate samples from Well MW-10 at concentrations of 200 and 170 μg/kg, respectively. The duplicate result, therefore, was 15 percent less than the original, well within the acceptable range noted previously. Duplicate metals, chloride and nitrate results for both wells were also well within the acceptable range with variations ranging from -4 percent (total chromium, MW-4) to +5.1 percent (chloride, MW-10). With the exception of the 1,1-dichloroethane results from MW-10, therefore, the duplicate results were in fairly close agreement.

4.2 Spiked Samples

Two sets of spiked samples were prepared by WCAS for analysis of purgeable aromatics, cadmium, chromium (total and hexavalent), copper and zinc. One

TABLE 4-1
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1990 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW04	MW04 (DUP)	MW10	MW10 (DUP)	TB01	TB02	TB03	TB04
Bromodichloromethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Bromoform	<0.50	<5.00	<1.00	<20.00	<20.00	<5.00	<1.00	<1.00	<1.00	<0.20	<0.20
Bromomethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	<0.50	<2.50	<0.50	<10.00	<10.00	<2.50	<2.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Chloroform	<0.20	<1.00	<0.20	**6.00**	**6.40**	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Chloromethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	<0.50	<2.50	<0.50	<10.00	<10.00	<2.50	<2.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	<0.50	<2.50	<0.50	<10.00	<10.00	<2.50	<2.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	<0.50	<2.50	<0.50	<10.00	<10.00	<2.50	<2.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	<0.20	<1.00	<0.20	**67.00**	**78.00**	**4.90**	**10.00**	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	<0.20	<1.00	<0.20	**140.00**	**160.00**	**90.00**	**120.00**	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethene	<0.20	<1.00	<0.20	**35.00**	**45.00**	**5.60**	**5.00**	<0.20	<0.20	<0.20	<0.20
1,2 Dichloroethene (Total)	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
cis-1,3-Dichloropropene	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
trans-1,3-Dichloropropene	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	<2.00	<10.00	<2.00	**54.00**	**58.00**	<10.00	<10.00	<2.00	<2.00	<2.00	<2.00
1,1,2,2-Tetrachloroethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Tetrachloroethene	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20
Trichloroethene	<0.20	<1.00	<0.20	**280.00**	**320.00**	**93.00**	**87.00**	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	<2.00	<10.00	<2.00	<40.00	<40.00	<10.00	<2.50	<2.00	<2.00	<2.00	<0.50
Vinyl Chloride	<0.20	<1.00	<0.20	<4.00	<4.00	<1.00	<1.00	<0.20	<0.20	<0.20	<0.20

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ATI.
< Denotes non-detection at indicated detection limit

DIW=De-ionized Water
EB=Equipment Blank
TB=Travel Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1990 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW04	MW04 (DUP)	MW10	MW10 (DUP)	TBO1	TBO2	TBO3	TBO4	WCAS	SP01
Benzene	< 0.50	< 2.50	< 0.50	< 10.00	< 10.00	< 2.50	< 2.50	< 0.50	< 0.50	**1.40**	**1.90**	**84.00**	**98.00**
Ethylbenzene	< 0.50	< 2.50	< 0.50	< 10.00	< 10.00	**200.00**	**170.00**	< 0.50	< 0.50	< 0.50	**0.80**	**72.00**	**110.00**
Toluene	< 0.50	< 2.50	< 0.50	< 10.00	< 10.00	< 2.50	< 2.50	< 0.50	< 0.50	**3.60**	**11.00**	**75.00**	**101.00**
Xylenes, Total	< 1.00	< 5.00	< 1.00	< 20.00	< 20.00	< 5.00	< 2.50	< 1.00	< 1.00	**1.40**	**3.60**	**142.00**	**200.00**

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.

DIW=De-ionized Water
EB=Equipment Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EBO1	EBO2	MW04	MW04 (DUP)	MW10	MW10 (DUP)	WCAS	SP01
Cadmium	<0.005	<0.005	<0.005	0.13	0.13	<0.005	< 0.005	0.50	0.54
Chromium, Hexavalent	<0.02	<0.02	<0.02	81.70	82.30	<0.02	< 0.02	0.94	0.91
Chromium, Total	<0.01	<0.01	<0.01	80.70	77.60	<0.01	< 0.01	4.50	4.80
Copper	0.04	<0.02	<0.02	=0.02	=0.02	<0.02	< 0.02	1.40	1.50
Zinc	<0.01	0.02	0.02	<0.01	<0.01	<0.01	< 0.01	2.70	3.10
Chloride	<2.00	<2.00	5.00	1000.00	1020.00	195.00	205.00	N A	N A
Nitrate (Nitrogen)	<0.05	<0.05	<0.05	<0.20	<0.20	<0.05	< 0.05	N A	N A

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.
NA= Not Analyzed

set of spiked samples (SP-01) was submitted to ATI as a QA/QC check. WCAS also analyzed a set (WCAS) in order to verify the spiked concentrations of their prepared samples. The results have been tabulated in Tables 4-2 and 4-3. Percent recoveries for ATI were generally within acceptable ranges, ranging from 117 to 153 percent for BTEX compounds, and from 97 to 115 percent for the five metals. According to Table 5-1 of the RFI Workplan, acceptable recovery values range from 77 to 123 percent for purgeable aromatics, 75 to 124 percent for hexavalent chromium, 61 to 126 percent for total chromium and cadmium, 78 to 114 percent for copper, and 68 to 120 percent for zinc.

4.3 Equipment Blank and Deionized Water Samples

Two equipment blanks were collected in order to verify that cross-contamination between wells did not occur during sampling. The equipment blank was obtained by pumping deionized water through the decontaminated sample pump and lines. The samples were collected in the appropriate containers and submitted for laboratory analysis. One equipment blank was collected from each sampling pump immediately after decontamination was completed. Sample EB-01 was collected after sampling well MW-11, and EB-02 was collected after sampling well MW-6B. Equipment blanks were submitted to the laboratory for analysis of purgeable halocarbons/ aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. In addition, a sample was collected from the deionized source water used for decontamination. The DIW sample was also analyzed for the parameters noted above.

During the April 1990 sampling, no purgeable halocarbons were detected in EB-1, EB-2, or the DIW samples. Trace levels (0.02 mg/l) of zinc were detected in both equipment blanks. Because 0.02 mg/l is barely above the detectable limit of .01 mg/l, this is not indicative of a cross-contamination problem. Copper was detected in the DIW sample, but this again was barely above the detection limit. Because copper has rarely been present in detectable amounts in samples, it is unlikely a source of contamination and does not indicate a problem. Chloride was detected in EB-2 at 5.00 mg/l. Because the detection limit is 2.00 mg/l and chloride is usually

detected at much higher levels in monitoring well samples, this does not indicate a contamination problem.

4.4 Travel Blanks

The detection of compounds in travel blanks is generally indicative of systematic contamination from sample transport, laboratory glassware cleaning, laboratory storage, or analytical procedures. For each day of sampling, one laboratory prepared travel blank consisting of organic-free water was labeled and submitted for purgeable halocarbon and aromatic volatile organic analysis by EPA Methods 601/602. Tables 4-1 and 4-2 show the results of travel blank analyses. Each travel blank was stored with the days' samples to be analyzed for volatile organic compounds. An examination of the tables reveals that no purgeable halocarbon compounds were detected in any of the four travel blanks. No purgeable aromatic compounds were detected in TB-1 or TB-2, however, benzene, toluene, and xylenes were detected in TB-3 and TB-4, and ethylbenzene was detected in TB-4. Because these compounds were not detected in monitor well samples submitted to the lab the same days, it is unlikely that these compounds were introduced during transport from SCC to the laboratory. ATI was contacted on this subject and could offer no explanation for the detection of these compounds in the travel blanks. Although it cannot be proven, it would appear that TB-3 and TB-4 were somehow contaminated with the purgeable aromatic compounds while in the custody of ATI. It is also possible that the organic-free source water used to make the travel blanks could have been contaminated with these compounds.

4.5 Steam Cleaner Sample

During the three sampling events prior to October 1989, a sample was collected from the steam cleaner in order to verify that the rental equipment was not a source of contamination. Steam cleaner samples were obtained from the end of the discharge nozzle and were analyzed for purgeable halocarbons/aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. An evaluation of the historical steam cleaner data verified that the rental unit was not a source of contamina-

tion. Therefore, starting with the October 1989 sampling, the collection of a steam cleaner sample for analysis was discontinued. In the event that the quality of the water discharged from the steam cleaner during subsequent rounds is suspect, additional samples will be collected as appropriate.

4.6 Sample Control

All samples were labeled immediately prior to sampling with a waterproof pen. Samples were transported under chain-of-custody and hand delivered by CDM personnel to the laboratories in ice-cooled chests. Copies of the chain-of-custody records are included in Appendix E.

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5.0 GROUND WATER ELEVATION

Prior to the initiation of well evacuation procedures, the depth to ground water was measured in each monitoring well. Ground water elevations were calculated by subtracting the depth to static water level from the surveyed elevation of the corresponding monitor well. The elevation of the ground water surface increased at each well since the previous January 1990 Quarterly Sampling. This increase ranged between 1.57 and 2.14 feet, with an average increase of 1.77 feet. During the previous January sampling, an average 0.96 foot increase in ground water elevation was noted. As has been observed during prior sampling events, no water was detected in monitoring well MW-06A which is screened in the Gage formation.

Figure A-1 shows the location of each monitoring well. In previous reports the location of MW-4 was incorrectly shown as the location of MW-4A. The figures in this report reflect this correction. Table 5-1 lists the depths to water and ground water elevations for each well. Figure A-2 shows the approximate ground water surface elevation of the Upper Hollydale Aquifer. The contours were drawn based on a three- point solution using wells MW-1, MW-5 and MW-6B. The elevation for deep well MW-4A was not included on the figure. An examination of the ground water elevation at each well location illustrates that the majority of the data points fall within the appropriate ground water elevation contours as drawn.

In several instances (MW-2, MW-4 and MW-8), the data points do not "fit" within the contour lines as well as would be expected. The field notes were checked and no obvious errors were found. As stated in previous quarterly sampling reports, apparent discrepancies could potentially be attributable to user error in measuring the water depths in wells or to an erroneous data base of casing elevations. During the October and January sampling, MW-02, MW-8, and MW-4 were found to not "fit" within the contour lines. At this point, expectations are that all existing wells will be resurveyed when new wells are installed during the forthcoming RCRA Facility Investigation. During the previous sampling event, the direction of ground water flow was approximately S 37° W at a gradient of 0.4 foot per 100 feet. As shown on Figure A-2 in Appendix A, the gradient and

TABLE 5-1

GROUND WATER ELEVATION DATA
APRIL 1990 QUARTERLY SAMPLING
SOUTHERN CALIFORNIA CHEMICAL

Well No.	Well Headspace* (ppm)	Total Depth Constructed (ft)	Total Depth Measured (ft)	Casing Fill (ft)	M.P. Elevation (ft)	Depth to Water (ft below M.P.)	G.W. Elevation (ft)
1	0	62.5	62.35	0.15	152.60	53.30	99.30
2	33	74.0	70.32	3.68	151.56	53.5	98.06
3	53	75.0	71.36	3.64	151.62	53.90	97.72
4	49	75.0	68.2	6.8	149.76	52.26	97.50
4a	8	107.0	108.7	0	152.49	54.62	97.87
5	13	75.0	73.3	1.7	153.21	56.14	97.07
6a	0	30.0	29.1	0.9	149.31	dry	dry
6b	NR	77.0	74.9	2.1	149.46	51.70	97.76
7	35	75.0	75.4	0	149.27	51.95	97.32
8	4.9	71.0	69.70	1.3	149.53	52.02	97.51
9	45	77.0	73.6	3.4	151.14	52.88	98.26
10	76	75.0	74.10	0.9	151.60	53.50	98.1
11	56	75.5	74.68	0.82	152.80	54.36	98.44

NR = No Reading
M.P. = Measuring Point (well head)
G.W. = Groundwater
* = Measured with PID prior to sampling

the direction of ground water flow have remained unchanged during the April 1990 sampling.

Of the 12 ground water monitoring wells completed in the Hollydale Aquifer, 10 are perforated in the approximate interval from 45 to 75 feet below ground surface. The exceptions are wells MW-01 and MW-04A which are perforated in the intervals from 42 to 62 feet and 87 to 107 feet, respectively. During the January 1989 round of sampling, the ground water elevation at well MW-04 (shallow) was a minimal 0.09 feet higher than the ground water elevation at well MW-04A (deep). In April 1989, ground water elevation at the shallow well was 0.91 feet higher than the deep well. During the July and October rounds of sampling, the ground water elevation of the deep well was 0.11 and 0.16 feet higher than the shallow well, respectively. In January 1990, the ground water elevation of the deep well was 0.20 feet higher than the shallow well. In April 1990, the ground water elevation of the deep well was 0.37 feet higher than the shallow well. Seasonal fluctuation does not appear to be the controlling factor since the previous four rounds have noted higher elevations at the deeper well site. Subsequent measurements at the location will allow for a determination of whether the observed difference is reflective of actual conditions or other factors.

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6.0 GROUND WATER QUALITY

Based upon the results of laboratory testing performed on the ground water samples collected January 1989 from the on-site monitor wells, the presence of two contaminant plumes in the Hollydale Aquifer was reaffirmed. Historically, these plumes have been present at varying concentrations and lateral extent. In January 1989, one plume consisting primarily of site-specific indicator parameters (metals), was aligned in a northeasterly direction in the vicinity of wells MW-04 and MW-09. The other, consisting of organic compounds, was similarly aligned along the northern boundary of the site property with the highest concentrations found in wells MW-03, MW-04, and MW-11.

Analytical results from the 12 wells sampled during the April 1990 quarterly monitoring have been compiled in Tables 6-1 through 6-3. As can be seen from an examination of the analytical data, significant amounts of total and hexavalent chromium and trichloroethene (80.70 and 81.70 mg/l, and 280 µg/l, respectively) were detected at well MW-04 (shallow). This finding is consistent with previous rounds of sampling. In addition, significant concentrations of ethylbenzene and total xylenes (2100 and 720 µg/l, respectively) were detected at well MW-3. The following sections will describe both metals and purgeable halocarbon/aromatics analytical results in detail.

6.1 Site-Specific Indicator Parameters

Hexavalent Chromium (Cr[VI])

Elevated levels of Cr(VI) were found to be present in MW-04 and MW-09 during the January 1989 sampling. Cr(VI) was originally detected in MW-04 at a concentration of 500 mg/l in June, 1985, and has fluctuated between 33 (January 1989 data) and 500 mg/l since. In order to compare the analytical data from the most recent sampling events (January, April, July and October 1989, January 1990) with the April 1990 data, Table 6-4 was compiled. The table compares parameters of interest (hexavalent and total chromium, cadmium, zinc, purgeable aromatics and trichloroethene) at selected well

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1990 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Bromodichloromethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Bromoform	<5.00	<1.00	<100.00	<20.00	<1.00	<1.00	<1.00	<5.00	<0.40	<1.00	<5.00	<5.00
Bromomethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Carbon Tetrachloride	<1.00	<0.20	87.00	<4.00	<0.20	120.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Chlorobenzene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	<2.50
Chloroethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Chloroform	<1.00	<0.20	<20.00	6.00	<0.20	76.00	<1.00	<1.00	<0.40	13.00	<1.00	<1.00
Chloromethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Dibromochloromethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	<2.50
1,3-Dichlorobenzene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	<2.50
1,4-Dichlorobenzene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	<2.50
Dichlorodifluoromethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
1,1-Dichloroethane	<1.00	<0.20	<20.00	67.00	<0.20	<1.00	<1.00	3.70	28.00	89.00	4.90	<1.00
1,2-Dichloroethane	<1.00	<0.20	<20.00	140.00	<0.20	4.70	<1.00	<1.00	0.80	15.00	90.00	23.00
1,1-Dichloroethene	<1.00	<0.20	<20.00	35.00	<0.20	<1.00	<1.00	<1.00	2.70	48.00	5.60	<1.00
1,2 Dichloroethene (Total)	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	1.20	5.30	<1.00	<1.00	<1.00
1,2-Dichloropropane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Methylene Chloride	<10.00	<2.00	<200.00	54.00	<2.00	<10.00	<10.00	<10.00	<4.00	<10.00	<10.00	<10.00
1,1,2,2-Tetrachloroethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Tetrachloroethene	3.80	<0.20	<20.00	<4.00	<0.20	<1.00	5.00	<1.00	1.00	2.00	<1.00	<1.00
1,1,1-Trichloroethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	4.00	<1.00	<1.00
1,1,2-Trichloroethane	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00
Trichloroethene	20.00	36.00	74.00	280.00	2.70	24.00	61.00	46.00	17.00	150.00	93.00	33.00
Trichlorofluoromethane	<10.00	<2.00	<200.00	<40.00	<2.00	<10.00	<2.50	<10.00	<4.00	<2.50	<10.00	<10.00
Vinyl Chloride	<1.00	<0.20	<20.00	<4.00	<0.20	<1.00	<1.00	<1.00	<0.40	<1.00	<1.00	<1.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ATI.
< Denotes non-detection at indicated detection limit

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1990 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	<2.50
Ethylbenzene	<2.50	<0.50	**2100.00**	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	**200.00**	**370.00**
Toluiene	<2.50	<0.50	<50.00	<10.00	<0.50	<2.50	<2.50	<2.50	<1.00	<2.50	<2.50	**2.60**
Xylenes, Total	<5.00	<1.00	**720.00**	<20.00	<1.00	<5.00	<2.50	<5.00	<4.00	<5.00	<5.00	**150.00**

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1990 QUARTERLY SAMPLING
METALS, CHLORIDE, NITRATE, EC AND pH ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	<0.005	< 0.005	< 0.005	0.13	< 0.005	<0.005	< 0.005	< 0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Hexavalent	<0.02	< 0.02	< 0.02	81.70	< 0.02	<0.02	< 0.02	< 0.02	<0.02	0.80	<0.02	<0.02
Chromium, Total	0.02	0.02	< 0.01	80.70	< 0.01	<0.01	0.02	< 0.01	<0.01	0.81	<0.01	<0.01
Copper	=0.02	< 0.02	< 0.02	= 0.02	< 0.02	<0.02	< 0.02	< 0.02	<0.02	<0.02	<0.02	<0.02
Zinc	0.02	=0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	0.02	0.03	<0.01	<0.01
Chloride	475.00	140.00	360.00	1000.00	130.00	85.00	90.00	450.00	160.00	250.00	195.00	115.00
Nitrate (Nitrogen)	1.20	1.50	2.60	< 0.20	5.70	6.60	9.40	5.00	4.70	3.50	<0.05	2.10
EC (umhos/cm)*	2000.00	1400.00	1800.00	5000.00	1250.00	1150.00	1250.00	2370.00	1360.00	1520.00	1590.00	1320.00
pH*	6.96	7.33	6.70	6.59	7.38	7.12	7.65	7.91	7.24	7.15	7.48	7.56

Note: All metal, chloride and nitrate results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI, except for * which were field analyzed.

TABLE 6-4 SELECTED WELLS/PARAMETERS COMPARISON FROM JANUARY 1989 TO APRIL 1990

		METALS			PURGEABLE AROMATICS				PURG. HALOCARBONS
MONITOR WELL	Hexavalent	Total	Cadmium	Zinc	Benzene	Toluene	Ethyl-	Total	Trichloro-
No. / Date	Chromium	Chromium					benzene	Xylenes	ethene
MW - 1									
Jan-89	ND	0.014	ND	0.015	ND	ND	ND	ND	19
Apr-89	ND	0.1	ND	ND	ND	ND	ND	3	23
Jul-89	ND	0.06	0.01	0.06	ND	ND	ND	ND	13
Oct-89	ND	ND	ND	0.11	ND	ND	ND	ND	12
Jan-90	ND	ND	ND	0.02	ND	ND	ND	ND	16
Apr-90	ND	0.02	ND	0.02	ND	ND	ND	ND	20
MW - 2									
Jan-89	0.017	0.022	ND	ND	ND	ND	ND	ND	60
Apr-89	ND	0.05	ND	ND	ND	ND	ND	ND	45
Jul-89	ND	0.06	ND	0.04	ND	ND	ND	ND	67
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	35
Jan-90	ND	ND	ND	0.01	ND	ND	ND	ND	27
Apr-90	ND	0.02	ND	0.01	ND	ND	ND	ND	36
MW - 3									
Jan-89	ND	ND	ND	ND	7.4	17	4900	1500	74
Apr-89	ND	0.07	ND	ND	ND	ND	1200	60	110
Jul-89	ND	0.06	ND	0.2	ND	ND	ND	ND	120
Oct-89	ND	ND	ND	ND	<50	<100	1600	150	<100
Jan-90	ND	ND	ND	0.01	ND	ND	110	ND	65
Apr-90	ND	ND	ND	ND	ND	ND	2100	720	74
MW - 4									
Jan-89	33	400	0.028	0.007	ND	10	15	29	120
Apr-89	43	100	0.05	ND	ND	23	15	50	280
Jul-89	120	98	0.08	0.09	ND	ND	140	40	290
Oct-89	110	120	0.07	0.04	ND	ND	ND	ND	250
Jan-90	109	95.1	0.12	0.01	ND	ND	ND	ND	220
Apr-90	82	80.7	0.13	0.01	ND	ND	ND	ND	280
MW - 7									
Jan-89	ND	ND	ND	ND	ND	1.4	1.2	3.6	35
Apr-89	ND	0.02	ND	ND	ND	ND	ND	1	47
Jul-89	ND	0.03	ND	ND	ND	ND	ND	ND	25
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	44
Jan-90	ND	ND	ND	ND	ND	ND	ND	ND	39
Apr-90	ND	ND	ND	ND	ND	ND	ND	ND	46
MW - 9									
Jan-89	0.45	0.33	ND	0.008	ND	ND	ND	ND	55
Apr-89	ND	0.06	ND	ND	ND	ND	ND	ND	24
Jul-89	ND	0.17	ND	0.08	ND	ND	ND	ND	57
Oct-89	2.5	1.8	ND	ND	ND	ND	ND	ND	110
Jan-90	2.28	2.2	ND	0.02	ND	ND	ND	ND	100
Apr-90	0.8	0.81	ND	0.03	ND	ND	ND	ND	150
MW - 11									
Jan-89	ND	ND	ND	ND	ND	ND	43	1.5	34
Apr-89	ND	0.04	ND	ND	ND	7500	2600	11000	39
Jul-89	ND	ND	ND	0.05	ND	ND	ND	90	29
Oct-89	ND	ND	ND	ND	ND	ND	200	ND	35
Jan-90	ND	ND	ND	0.01	ND	ND	83	ND	46
Apr-90	ND	ND	ND	ND	ND	2.6	370	150	33

NOTE: Concentrations reported in mg/l for all metals and ug/l for purgeable aromatics/halocarbons.

locations. Wells were selected based on an evaluation of their relative position and past indications of contamination. Well MW-1 was selected because of its upgradient location. Wells MW-2, MW-3 and MW-11 were selected because of their position along the northern border of the site and significant past detections of purgeable aromatic compounds. Well MW-4 was included in the comparison because it historically yields the highest chromium concentrations. Well MW-9 was selected because of its location downgradient from the former chromic acid underground storage tank. Well MW-7 was chosen because of its position adjacent to the ferric chloride area.

During the January and April 1989 sampling events, the concentration of Cr(VI) in MW-04 had significantly decreased since the September 1988 sampling when it was detected at 170 mg/l. During the July 1989 sampling, the concentration increased significantly to 120 mg/l. At the present time, its concentration remained fairly stable at 110 mg/l in October 1989 and at 109 mg/l in January 1990. The concentration decreased significantly to 82 mg/l in the April 1990 sampling event. In September 1986, Cr(VI) in MW-09 was detected at a concentration of 0.05 mg/l, with fluctuations between non-detected and 2.50 mg/l since. During the April and July 1989 sampling, it was not detected at a method detection limit of 0.05 mg/l. Cr(VI) was detected, however, during the October 1989 sampling at a concentration of 2.5 mg/l, in January 1990 at 2.28 mg/l, and in April 1990 at 0.80 mg/l. It should be noted that the water discharged from well MW-09 in October 1989, January 1990, and in April 1990, was slightly greenish yellow in color. The discoloration did not change significantly during the evacuation of three saturated casing volumes of water from the well during October 1989, January 1990, or April 1990 (40, 36, and 40 gallons, respectively). The October 1989 sampling event was the first time discoloration typical of chromium contamination was observed by CDM sampling team members in an on-site well other than well MW-04. It was not detected in any of the remaining monitoring wells above the method detection limit of 0.05 mg/l in April, July or October 1989, or in January or April 1990. Figure A-3 in Appendix A shows the concentration of Cr(VI) detected at wells MW-4 and MW-9 during the April 1990 sampling.

Total Chromium (Cr[T])

Historically, Cr(T) has been present at elevated concentrations in ground water samples collected from monitoring wells MW-04 and MW-09. Cr(T) was initially detected in MW-04 at a concentration of 500 mg/l in June 1985, with fluctuations between 61 and 550 mg/l since. Cr(T) was initially detected in MW-09 at a concentration of 0.12 mg/l in June 1987, with fluctuations between 0.06 and 2.75 mg/l (September 1988) since. The most recent analytical results from the April 1990 sampling event show that the concentration of Cr(T) has decreased slightly at MW-4 and MW-9.

The July 1989 analytical data showed that, with the exception of well MW-11, Cr(T) was detected in all on-site wells. During the October 1989 and January 1990 sampling events, Cr(T) was detected only in wells MW-4 and MW-9. During April 1990 sampling, Cr(T) was also detected in Wells MW-1, MW-2, and MW-6B at concentrations slightly above the detection limit. Figure A-4 shows the concentrations of Cr(T) detected during the April 1990 sampling.

In previous reports (February 1988, June 1988) Kleinfelder attributed the apparent rise in Cr(T) concentration after February 1988 to a change in sample preparation, and not a change in ground water quality. Brown & Caldwell, the laboratory that Kleinfelder selected as their analytical laboratory prior to February 1988, used a modification of EPA Method 3010 sample preparation in which the sample was not mixed prior to analysis. CRL, the laboratory that Kleinfelder selected as their analytical laboratory beginning in February 1988, prepared samples in strict accordance with EPA Method 3010. This method requires that samples are well-mixed, keeping all solids in suspension prior to removal of the sample from the sample container. It was believed that this mixing of the sample yielded Cr(T) concentrations that included suspended sediments. Hence, Kleinfelder began in May 1988, the practice of field filtering the ground water samples to be analyzed for metals through a 0.45-micron screen. All samples collected for metals analyses during the April 1990 sampling were filtered in the field using a sterile 0.45-micron filter, except for MW-1, MW-2, MW-3, MW-4 and MW-11, which were filtered in the lab by ATI.

It is interesting to note that during the April 1989 sampling, total chromium was detected in all 12 monitor well samples. During the July 1989 sampling, it was detected in 11 of the 12 on-site wells. During the October 1989 and January 1990 sampling, it was detected only in wells MW-4 and MW-9. During April 1990 sampling, Cr(T) was detected in Wells MW-1, MW-2, M-4, MW-6B and MW-9. A federal MCL (maximum contamination limit) for chromium has been established at 0.05 mg/l. The fact that total chromium has historically been detected in the upgradient wells MW-01 and MW-02 and in the other ten on-site wells, could be indicative of a regional ground water contamination problem.

Total chromium has consistently been detected in well MW-4 since the inception of ground water monitoring in 1985, and first appeared in 1987 and 1988 at other well locations. Based on a review of the available data, it cannot be established at the present time whether a regional problem does exist. This issue should be resolved during subsequent ground water sampling at the site.

It should be noted that the reported total chromium concentration for well MW-04 (monitor well and duplicate samples) was slightly less than the concentrations of hexavalent chromium reported for those samples. The detection of less total chromium than hexavalent chromium has been a recurring analytical problem with previous laboratories, and has been considered a minor analytical quality assurance problem. The laboratory was informed of this potential problem during the April Sampling and Analysis. According to ATI, hexavalent chromium is sometimes slightly higher than the total chromium due to the fact that different methods are used to determine total and hexavalent chromium concentrations. Because the difference between total and hexavalent chromium is within the lab's allowable analytical error, the lab does not consider these differences problematic.

Cadmium (Cd)

Prior to the July 1989 sampling, cadmium had only been detected in ground water samples collected from monitoring well MW-04. Cadmium was initially

detected in MW-04 at a concentration 0.78 mg/l in June 1985 with fluctuations between non-detection and 0.92 mg/l (July 1985) since. The concentration of cadmium had increased slightly at well MW-04 during the first three quarters of 1989. The concentration of cadmium at MW-04 rose from 0.07 mg/l in October 1989 to 0.12 mg/l in January 1990. During the April 1990 sampling, cadmium was detected at 0.13 mg/l in MW-04. During the July 1989 sampling cadmium was also detected for the first time, (0.01 mg/l) in well MW-01 at the method detection limit, but it has not been detected since. A federal MCL of 0.010 mg/l has been established for cadmium. Figure A-5 shows the concentration of cadmium which was detected at well MW-04 during the April 1990 sampling.

Zinc (Zn)

Isolated detections of zinc in ground water have occurred in samples from each well since the inception of the quarterly ground water monitoring program. Concentrations have ranged from non-detections at less than 0.001 mg/l to 0.35 mg/l. The most consistent detections have occurred in ground water samples collected from monitoring well MW-01. The concentration of zinc in MW-01 decreased from 0.08 mg/l in September 1988 to 0.015 mg/l in January 1989. During the October 1989 sampling, zinc was detected in the well at a concentration of 0.11 mg/l. Zinc was detected at MW-01 at a concentration of 0.02 mg/l during the January and April 1990 samplings. At these low levels, the occurrence of zinc does not appear to be of significant concern. A federal MCL of 5.0 mg/l has been established for zinc. Figure A-6 shows that zinc was detected at or slightly above the detection limit of 0.01 in wells MW-1,MW-2, MW-5, MW-8 and MW-9 during the April 1990 sampling.

6.2 Organic Compounds

Reportedly, organic chemicals have not historically been used on-site in any of the production processes by SCC. Two 10,000 gallon underground storage tanks (diesel and gasoline), however, were located in the approximate center of the facility, due east of the drum wash area. During tank removal operations in July 1989, petroleum hydrocarbon contamination was

discovered in the tank excavation. SCC is in the process of investigating the extent of contamination. Historically, organic compounds have been detected in ground water underlying the facility in the Hollydale aquifer, varying in both concentration and lateral extent. The primary organic compounds of concern are the purgeable aromatic compounds and the chlorinated solvent trichloroethylene (TCE), and various forms of dichloroethane and dichloroethene. The individual compounds and the concentrations they have been detected at will be discussed in the following paragraphs.

Ethylbenzene

During the January 1989 sampling, ethylbenzene was detected in wells MW-03, -4, -7, -10 and -11 at concentrations of 4,900, 15, 1.2, 0.54 and 43 $\mu g/l$, respectively. The April 1989 analytical results revealed that the concentration at MW-04 remained the same, while concentrations decreased at MW-03 and increased significantly at MW-11. Ethylbenzene was not detected in the remaining nine wells. During the July 1989 sampling event, ethylbenzene was detected in well MW-4 at a concentration of 140 $\mu g/l$, a significant increase from the previous two rounds. Ethylbenzene was not detected in the remaining 11 wells. During the October 1989 sampling, it was detected in wells MW-3, MW-10 and MW-11 at concentrations of 1600, 190 and 200 $\mu g/l$, respectively. During the January 1990 sampling, ethylbenzene was again detected in wells MW-3, MW-10 and MW-11 at concentrations of 110, 210, and 83 $\mu g/l$, respectively. Ethylbenzene was detected in MW-3, MW-10 and MW-11 at 2,100, 200 and 370 $\mu g/l$, respectively, during the April 1990 sampling event. These data clearly indicate the presence of an ethylbenzene plume in the northwest corner of the facility. As can be seen by an examination of Table 6-4, significant concentrations of ethylbenzene have been detected at well MW-3 during four of the last five sampling events. Concentrations from the January 1990 sampling are illustrated in Figure A-7 of Appendix A.

Total Xylenes

During the January 1989 sampling, total xylenes were detected in wells MW-03, -4, -4A, -7, -8, and -11, at concentrations of 1,500, 29, 1.3, 3.6,

1.6 and 1.5 µg/l, respectively. The April 1989 analytical results revealed that xylene concentrations decreased in wells MW-03 and -7 to 60 and 1.0 µg/l, respectively, and were not detected at all in wells MW-4A and -8. Concentrations increased significantly at well MW-11 and increased slightly to 50 µg/l at well MW-4. Total xylenes were not detected in the remaining six wells. During the July 1989 sampling, total xylenes were detected only in wells MW-4, -10 and -11 at concentrations of 40, 30 and 90 µg/l, respectively. During the October 1989 sampling, xylenes were detected at a concentration of 150 µg/l only in well MW-3. Xylenes were not detected in any of the wells during the January 1990 sampling. Xylenes were detected in MW-3 and MW-11 at concentrations of 720 and 150 µg/l, respectively during April 1990 sampling. Concentrations from the April 1990 sampling are illustrated in Figure A-8 of Appendix A.

Toluene

Toluene was detected during the January 1989 sampling at wells MW-03, -4, and -7, at concentrations of 17, 10 and 1.4 µg/l, respectively. The April 1989 analytical results revealed that the concentrations at wells MW-03 and -7 declined to nondetectable levels, while the concentration at MW-4 increased slightly to 23 µg/l. Toluene was not detected at well MW-11 in January 1989, however, during the April 1989 sampling a significant concentration was found. During the July and October 1989, and the January 1990 sampling events, toluene was not detected in any of the 12 on-site wells. Toluene was detected in MW-11 at a concentration of 2.60 µg/l during the April 1990 sampling. Concentrations from the April 1990 sampling are illustrated in Figure A-9 of Appendix A.

Benzene

The appearance of benzene, a known carcinogen, has been very erratic throughout the course of the ground water monitoring program. Benzene has never been detected in wells MW-01, -2, -6B, -8, -9 and -10. In most cases where benzene has historically been detected, reported values have ranged from not detected to a maximum of 20 µg/l. During the January 1989

sampling event, benzene was detected in wells MW-03 and -5 at concentrations of 7.4 and 0.9 μg/l, respectively. Benzene was not detected in any of the 12 wells during the April or July 1989 sampling events. During the October 1989 sampling, it was detected at a concentration of 0.06 μg/l (slightly above the 0.05 μg/l detection limit) in well MW-5. Benzene was not detected in any of the wells during the January 1990 sampling event. Non-detections from the April 1990 sampling are illustrated in Figure A-10 of Appendix A. It should be noted that because of the presence of significant concentrations of ethylbenzene and total xylenes at Well MW-3, the detection limits for benzene and toluene were increased to 50 μg/l for that sample.

Trichloroethylene

As illustrated in Figure A-11 of Appendix A, trichloroethylene (TCE) was detected in all 12 of the ground water monitoring wells in April 1990. During the October 1989 sampling event, TCE was detected in 11 of the 12 ground water monitoring wells. Because of the increased detection limit (100 μg/l) was not detected in well MW-03 at that time. During the January, April and July 1989 quarterly sampling events, TCE was also found in all 12 on-site ground water monitoring wells. TCE concentrations in January 1989 ranged from a high of 120 μg/l in the shallow well at MW-04 to a low of 6.7 μg/l in the deep well at that location. In April 1989, the concentrations at those locations ranged from a high of 280 to a low of 7 μg/l, respectively. In July and October 1989, and January 1990, the concentrations were comparable, with highs of 290, 250, and 220 μg/l to lows of 5, 3, and 8 μg/l, respectively, at those locations. In April 1990 the concentrations of the shallow and deep wells at MW-04 were 280 and 2.70 μg/l, respectively.

Numerous other purgeable halocarbon compounds were also detected in several of the on-site wells at concentrations ranging from 0.80 to 140 μg/l during the April 1990 sampling. Various forms of dichloroethane and dichloroethene, degradation products of trichloroethane and trichloroethene, were the more common of the other constituents detected.

A review of the analytical results contained in Appendix B reveals that, with minor exceptions, TCE has historically been detected in all on-site monitor wells, including upgradient wells. It would seem that the problem exists well beyond the boundaries of the subject facility. Recent discussions with the Department of Health Services and the Regional Water Quality Control Board indicate that TCE is generally recognized as a regional ground water contaminant.

7.0 ASSESSMENT QUARTERLY GROUND WATER MONITORING PROGRAM STATUS

To date, CDM has implemented the field sampling protocols outlined in the unapproved Kleinfelder QAPP with minor modification. CDM has also submitted for regulatory approval a Sampling and Analysis Plan, a Quality Assurance/ Quality Control Plan, a Health and Safety Plan, and a Data Management Plan as components of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Workplan promulgated by an Administrative Order on Consent, dated December 8, 1988 by EPA. When the RFI Workplan is granted final approval, subsequent quarterly ground water sampling programs will follow the specifications and procedures which are contained therein. CDM offers no warranty, expressed or implied, as to the adequacy, accurateness, or appropriateness of the unapproved Kleinfelder QAPP. This document was used as guidance simply on the basis of it being the status quo guidance document for quarterly sampling procedures at SCC in lieu of following procedures outlined in a document approved for the purposes of conducting the pending RCRA Facility Investigation.

8.0 REFERENCES

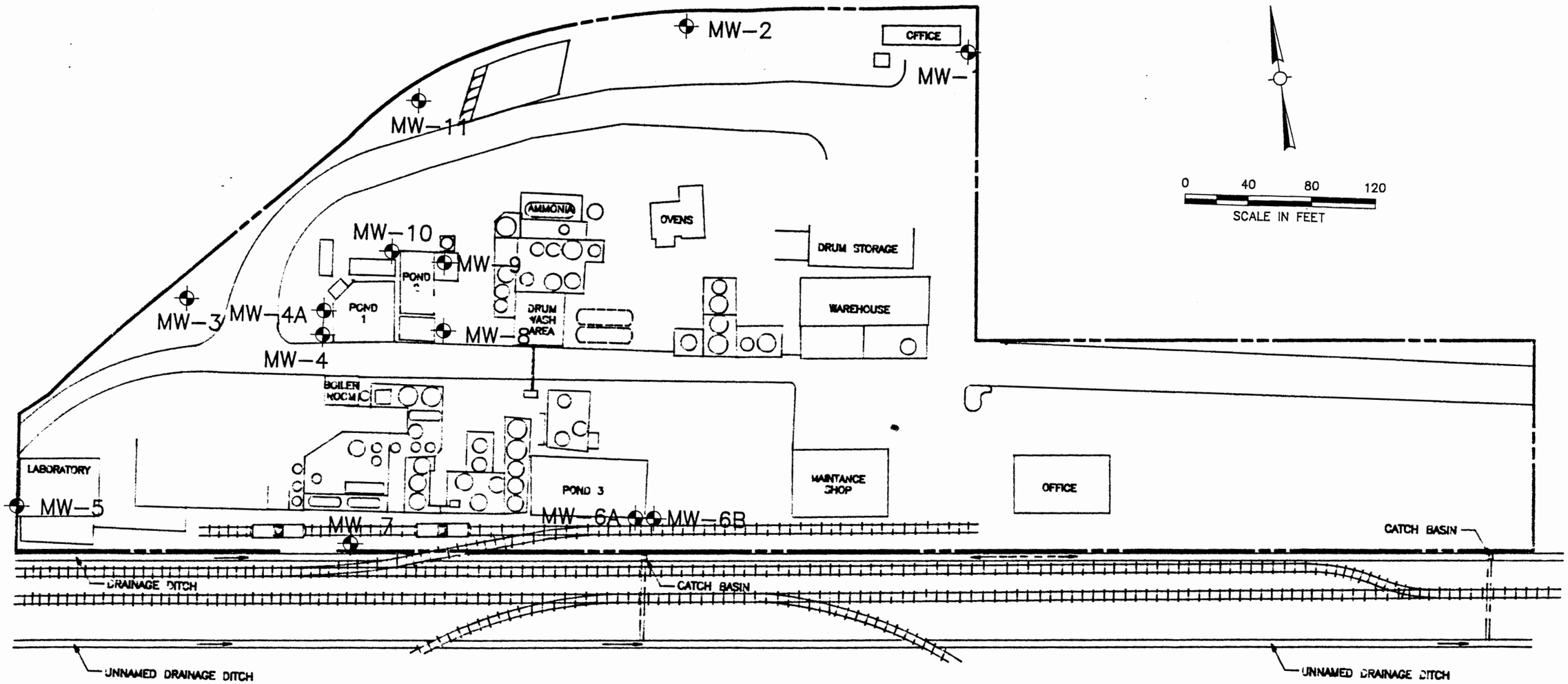
Camp Dresser & McKee Inc., RCRA Facility Investigation Work Plan, Southern California Chemical, November 28, 1989.

Camp Dresser & McKee Inc., Current Conditions Report, Southern California Chemical, November 1989.

J.H. Kleinfelder & Associates, Quality Assurance Project Plan, Southern California Chemical, May 1988.

APPENDIX A

FIGURES



LEGEND

APPROXIMATE MONITORING WELL LOCATION

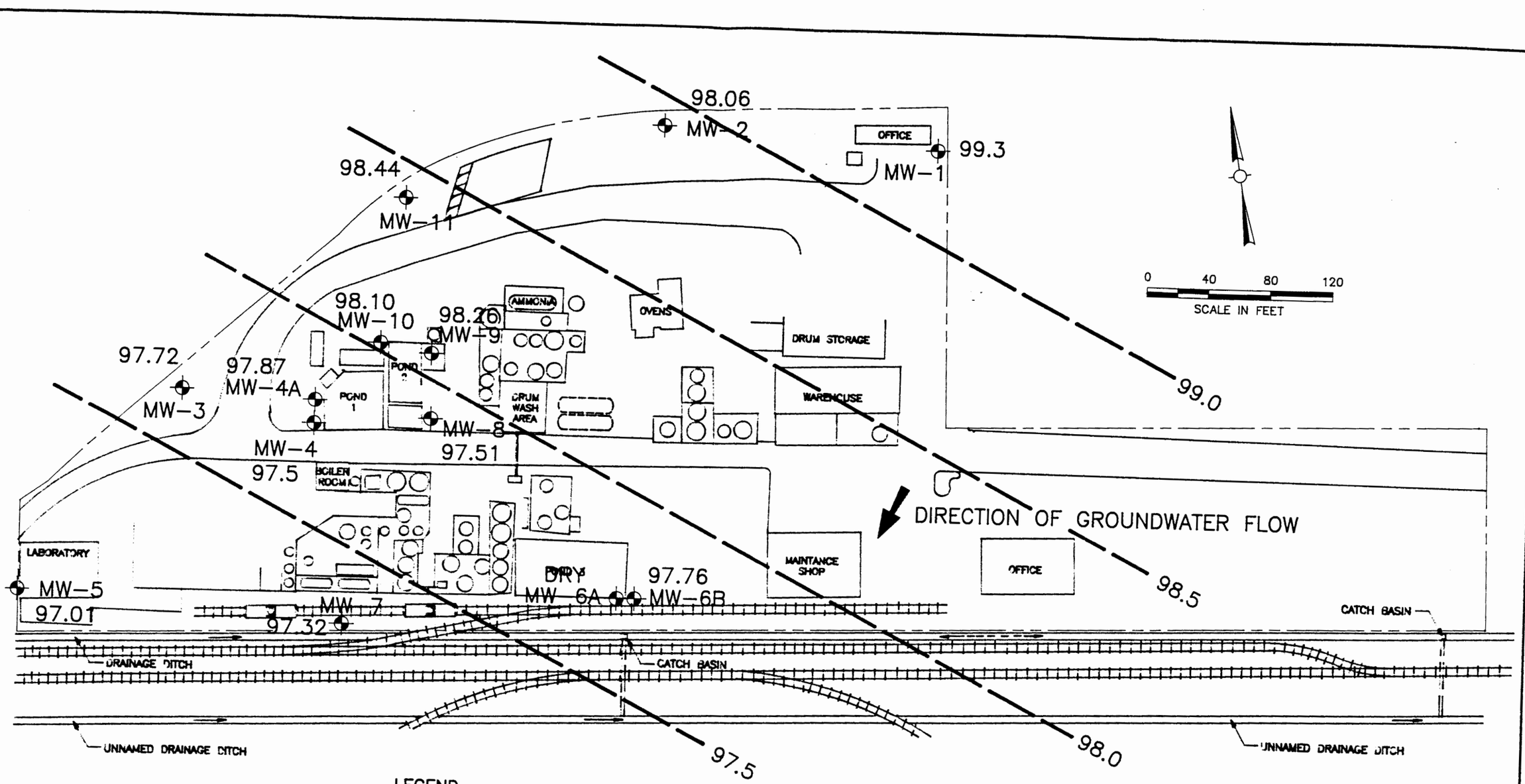
Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

MONITORING WELL LOCATION MAP

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-1



LEGEND

- APPROXIMATE MONITORING WELL LOCATION
- 95 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR (FEET MSL)
- GENERAL DIRECTION OF GROUND WATER FLOW

NOTE:
CONTOURS BASED ON THREE-POINT SOLUTION USING WELLS MW-1, MW-5 AND MW-6B.

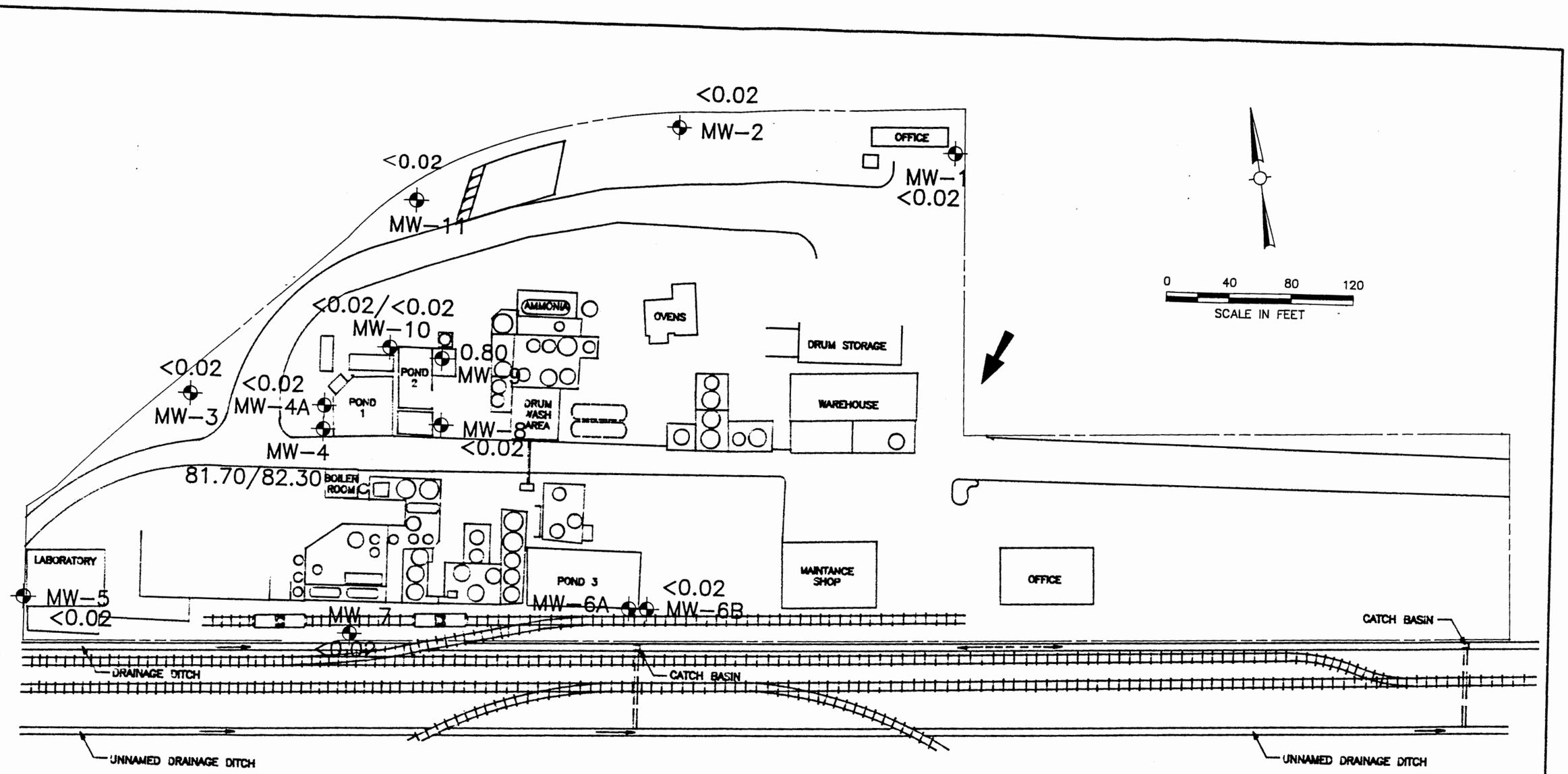
Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

GROUND WATER ELEVATION
HOLLYDALE AQUIFER
APRIL 1990

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-2



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

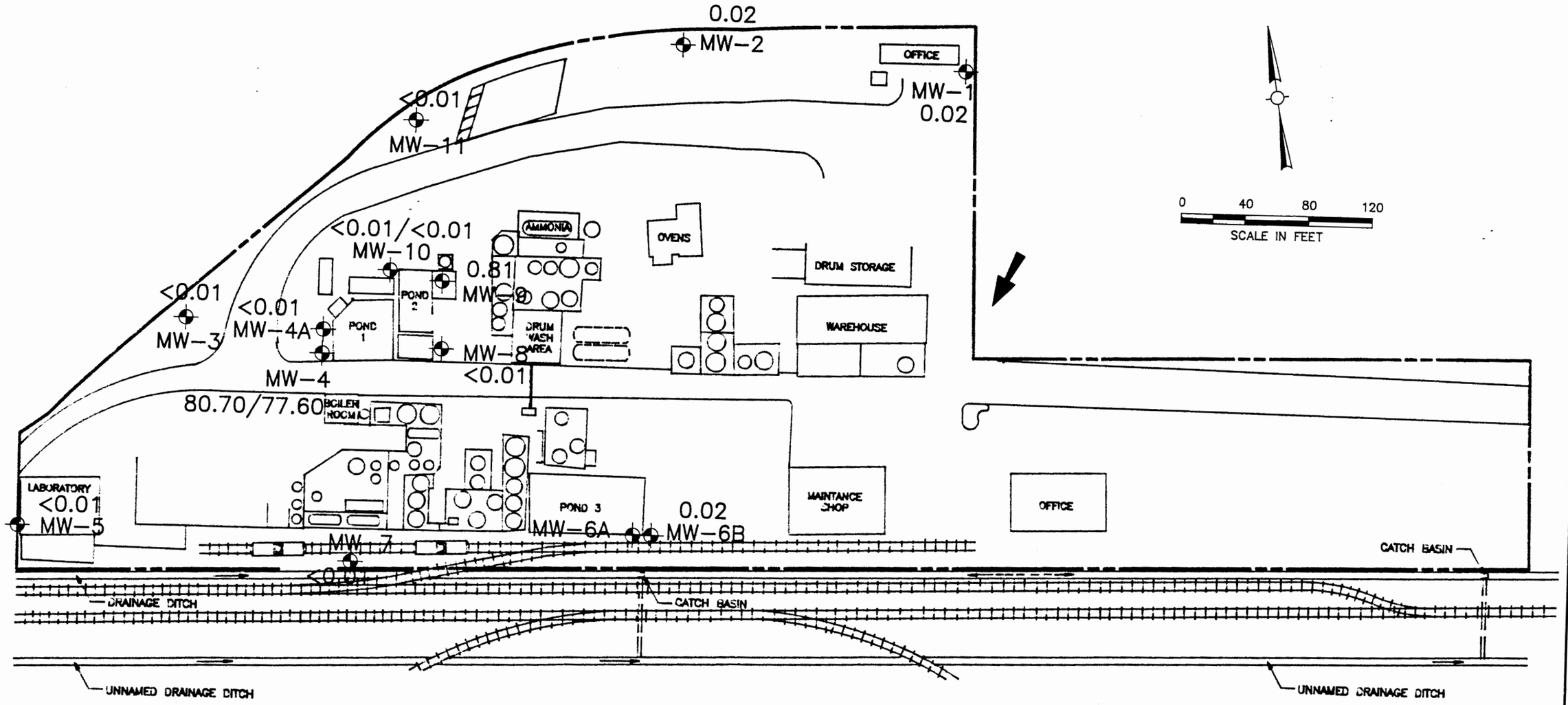
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF HEXAVALENT CHROMIUM IN GROUND WATER

APRIL 1990

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-3



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL
CHROMIUM IN GROUND WATER

APRIL 1990

environmental engineers, scientists, planners, & management consultants **CDM**

FIGURE A-4

APPENDIX B

HISTORIC GROUND WATER ANALYSES DATA

JANUARY 1990 MONITOR WELL RESULTS

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Bromodichloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Bromoform	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Bromomethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Carbon Tetrachloride	< 0.20	< 0.40	28.00	< 5.00	< 0.20	52.00	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Chlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.20	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Chloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Chloroform	< 0.20	< 0.40	23.00	5.10	< 0.20	42.00	< 1.00	< 1.00	0.49	8.10	< 2.00	< 2.00
Chloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Dibromochloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,2-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,3-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,4-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,1-Dichloroethane	< 0.20	< 0.40	< 2.00	72.00	< 0.20	0.42	< 1.00	2.40	29.00	60.00	9.80	5.50
1,1-Dichloroethene	0.73	< 0.40	4.00	33.00	< 0.20	< 0.40	< 1.00	< 1.00	6.60	36.00	8.40	< 2.00
1,2-Dichloroethane	0.89	< 0.40	20.00	100.00	< 0.20	2.20	< 1.00	< 1.00	0.83	3.90	80.00	28.00
1,2-Dichloropropane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
cis-1,3-Dichloropropene	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
trans-1,3-Dichloropropene	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Methylene Chloride	< 2.00	< 4.00	< 20.00	74.00	< 2.00	< 4.00	< 10.00	< 10.00	< 2.00	< 10.00	< 20.00	< 20.00
1,1,2,2-Tetrachloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Tetrachloroethene	3.10	0.54	< 5.00	< 5.00	< 0.20	< 0.40	6.40	< 1.00	1.40	2.20	< 2.00	< 2.00
1,1,1-Trichloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	0.41	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,1,2-Trichloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Trichloroethene	16.00	27.00	65.00	220.00	8.00	16.00	46.00	39.00	28.00	100.00	84.00	46.00
Trichlorofluoromethane	< 2.00	< 4.00	< 20.00	< 50.00	< 0.20	< 0.40	< 10.00	< 10.00	< 2.00	< 10.00	< 20.00	< 20.00
Vinyl Chloride	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Dichlorodifluoromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,2 Dichloroethane (Total)	0.35	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	4.70	1.30	< 2.00	< 2.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ATI.
< Denotes non-detection at indicated detection limit

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Ethylbenzene	< 0.50	< 1.00	110.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	210.00	83.00
Tolulene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Xylenes, Total	< 1.00	< 2.00	< 10.00	< 25.00	< 1.00	< 2.00	< 5.00	< 5.00	< 1.00	< 5.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
JANUARY1990 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, Hexavalent	< 0.02	< 0.02	< 0.02	109.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.28	< 0.02	< 0.02
Chromium, Total	< 0.01	< 0.01	< 0.01	95.10	< 0.01	= 0.01	< 0.01	< 0.01	< 0.01	2.20	< 0.01	< 0.01
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	0.02	= 0.01	= 0.01	= 0.01	< 0.01	= 0.01	0.02	< 0.01	= 0.01	0.02	0.02	= 0.01
Chloride	513.00	101.00	309.00	2200.00	121.00	114.00	77.10	300.00	222.00	329.00	208.00	103.00
Nitrate (Nitrogen)	4.90	6.40	1.30	0.68	6.00	6.60	9.70	6.10	4.20	5.90	0.20	0.20

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND (units)	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
EC 1 (umhos/cm)	2640.00	1460.00	1970.00	4340.00	1510.00	1380.00	1250.00	2150.00	1720.00	2070.00	1790.00	1530.00
EC 2 (umhos/cm)	2640.00	1470.00	1990.00	4380.00	1510.00	1380.00	1270.00	2160.00	1720.00	2080.00	1810.00	1550.00
EC 3 (umhos/cm)	2550.00	1460.00	2000.00	4360.00	1530.00	1380.00	1260.00	2170.00	1750.00	2080.00	1810.00	1560.00
EC 4 (umhos/cm)	2650.00	1470.00	2010.00	4440.00	1530.00	1370.00	1280.00	2200.00	1740.00	2090.00	1810.00	1550.00
pH 1 (lab units)	7.03	7.70	7.41	6.70	7.41	7.03	7.36	7.69	7.63	7.41	7.70	7.77
pH 2 (lab units)	6.98	7.72	7.44	6.67	7.42	7.11	7.34	7.74	7.61	7.45	7.80	7.81
pH 3 (lab units)	7.16	7.72	7.49	6.72	7.43	7.23	7.35	7.72	7.61	7.48	7.71	7.86
pH 4 (lab units)	7.27	7.78	7.46	6.67	7.47	7.16	7.39	7.74	7.68	7.47	7.81	7.78
TOC 1 (mg/l)	9.20	1.00	38.20	59.00	8.30	6.90	1.20	1.90	2.20	3.70	35.50	18.90
TOC 2 (mg/l)	8.80	1.30	38.60	59.30	4.40	6.30	1.30	1.30	2.30	4.00	36.30	20.20
TOC 3 (mg/l)	8.40	0.80	37.90	57.00	2.50	6.40	1.30	1.10	1.60	3.50	36.60	20.10
TOC 4 (mg/l)	8.40	= 0.50	37.30	59.10	1.50	6.20	0.90	1.60	2.00	3.60	35.80	20.40
TOX 1 (ug/l)	48.00	35.00	190.00	1700.00	= 8.00	160.00	57.00	37.00	69.00	220.00	190.00	83.00
TOX 2 (ug/l)	61.00	45.00	250.00	1700.00	< 8.00	140.00	62.00	44.00	78.00	220.00	190.00	88.00
TOX 3 (ug/l)	59.00	35.00	260.00	1300.00	13.00	150.00	58.00	44.00	74.00	240.00	210.00	78.00
TOX 4 (ug/l)	61.00	40.00	210.00	2200.00	13.00	140.00	59.00	38.00	81.00	170.00	220.00	74.00

< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI.

EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halide

October 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03 *	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromomethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Vinyl Chloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Chloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Methylene Chloride	< 1.00	< 1.00	< 100.00	30.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00	< 10.00	< 10.00
Trichlorofluoromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1-Dichloroethene	< 1.00	< 1.00	< 100.00	60.00	< 1.00	< 1.00	< 1.00	< 1.00	4.00	40.00	< 10.00	< 10.00
1,1-Dichloroethane	< 1.00	< 1.00	< 100.00	100.00	< 1.00	10.00	< 1.00	4.00	40.00	90.00	< 10.00	< 10.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 100.00	20.00	< 1.00	< 1.00	< 1.00	2.00	8.00	< 10.00	< 10.00	< 10.00
Chloroform	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	31.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloroethane	< 1.00	< 1.00	< 100.00	70.00	< 1.00	10.00	< 1.00	< 1.00	< 1.00	< 10.00	50.00	70.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	= 10.00	< 10.00
Carbon Tetrachloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	39.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromodichloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloropropane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Trichloroethene	12.00	35.00	< 100.00	250.00	3.00	15.00	29.00	44.00	22.00	110.00	70.00	35.00
Dibromochloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromoform	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Tetrachloroethene	3.00	2.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	3.00	= 1.00	< 10.00	< 10.00	< 10.00
1,1,2,2-Tetrachloroethane	NR	NR	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	NR	NR	< 10.00	< 10.00	< 10.00
Chlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by Enseco.
< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit
* Higher detection limits due to sample matrix
NR=Not Reported, compound coelutes with Tetrachloroethene and is combined with that result.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.50	< 0.50	< 50.00	< 5.00	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 5.00	< 5.00
Toluene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	1600.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	190.00	200.00
Xylenes, Total	< 1.00	< 1.00	150.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	110.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.50	< 0.05	< 0.05
Chromium, Total	< 0.02	< 0.02	< 0.02	120.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.80	< 0.02	< 0.02
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Zinc	0.11	< 0.02	< 0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chloride	710.00	100.00	470.00	1400.00	110.00	120.00	75.00	550.00	160.00	520.00	230.00	110.00
Nitrate (Nitrogen)	3.30	6.50	1.90	0.60	4.40	4.20	7.80	4.70	4.90	6.80	0.20	1.10

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

July 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromomethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Vinyl Chloride	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Methylene Chloride	< 1.00	< 1.00	20.00	170.00	2.70	< 1.00	< 1.00	< 1.00	1.00	3.00	38.00	1.00
Trichlorofluoromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1-Dichloroethene	< 1.00	< 1.00	10.00	50.00	< 1.00	2.00	1.00	1.00	14.00	14.00	15.00	2.00
1,1-Dichloroethane	< 1.00	1.00	< 10.00	80.00	< 1.00	4.00	< 1.00	15.00	74.00	28.00	12.00	4.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	1.00	3.00	15.00	< 3.00	< 10.00	< 1.00
Chloroform	< 1.00	1.00	33.00	< 20.00	< 1.00	57.00	< 1.00	1.00	3.00	< 4.00	10.00	1.00
1,2-Dichloroethane	< 1.00	< 1.00	10.00	120.00	< 1.00	< 1.00	< 1.00	1.00	10.00	37.00	150.00	7.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	1.00	< 4.00	< 10.00	< 1.00
Carbon Tetrachloride	< 1.00	1.00	60.00	< 20.00	1.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromodichloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichloropropane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Trichloroethene	13.00	67.00	120.00	290.00	5.00	46.00	29.00	25.00	43.00	57.00	180.00	29.00
Dibromochloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromoform	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Tetrachloroethene	1.00	< 1.00	< 10.00	< 20.00	1.00	2.00	6.00	1.00	2.00	< 2.00	10.00	1.00
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 0.70	< 7.00	< 14.00	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 7.00	< 7.00
Toluene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	< 10.00	**140.00**	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Xylenes, Total	< 1.00	< 1.00	< 10.00	**40.00**	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	**30.00**	**90.00**

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
METALS, CLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	0.01<	0.01<	0.01	0.08<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	120.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chromium, Total	0.06	0.06	0.06	98.00	0.13	0.04	0.04	0.03	0.06	0.17	0.11	< 0.02
Copper	0.03<	0.02<	0.02	0.06<	0.05<	0.05<	0.05<	0.05	0.02	0.02<	0.05	0.13
Zinc	0.06	0.04	0.20	0.09	0.08	0.09	0.09<	0.04	0.05	0.08	0.15	0.05
Chloride	490.00	130.00	380.00	900.00	120.00	120.00	82.00	300.00	270.00	190.00	180.00	140.00
Nitrate (Nitrogen)	4.60	6.90	3.40	0.60<	0.20	10.40	9.20	4.50	32.00	3.20<	0.20	0.20

Note: All results in milligrams per liter (mg/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04a	MW05
TOX 1 (mg/l)	0.05	0.08	0.13	0.30<	0.01	0.20
TOX 2 (mg/l)	0.10	0.08	0.08	0.30<	0.01	0.20
TOX 3 (mg/l)	0.07	0.08	0.14	0.10<	0.01	0.20
TOX 4 (mg/l)	0.05	0.06	0.08	0.10<	0.01	0.15
pH 1 (lab units)	7.11	7.32	7.05	6.67	7.44	6.83
pH 2 (lab units)	7.07	7.33	7.05	6.67	7.42	6.77
pH 3 (lab units)	7.08	7.32	7.04	6.67	7.42	6.80
pH 4 (lab units)	7.07	7.34	7.06	6.67	7.43	6.78
EC 1 (umhos/cm)	2100.00	1200.00	1800.00	3200.00	1200.00	1500.00
EC 2 (umhos/cm)	2030.00	1100.00	1800.00	3200.00	1200.00	1500.00
EC 3 (umhos/cm)	2010.00	1200.00	1800.00	3100.00	1200.00	1500.00
EC 4 (umhos/cm)	2100.00	1200.00	1800.00	3100.00	1300.00	1500.00
TOC 1 (mg/l)	8.00<	1.00	17.00	140.00<	1.00<	1.00
TOC 2 (mg/l)	9.00<	1.00	17.00	170.00<	1.00<	1.00
TOC 3 (mg/l)	8.00<	1.00	17.00	130.00<	1.00<	1.00
TOC 4 (mg/l)	8.00<	1.00	18.00	70.00<	1.00<	1.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

TABLE 6-4 (continued)
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW6b	MW07	MW08	MW09	MW10	MW11
TOX 1 (mg/l)	0.03	0.40	0.13	0.22	0.10	0.33
TOX 2 (mg/l)	0.13	< 0.01	0.16	0.20	0.20	0.07
TOX 3 (mg/l)	0.90	0.03	0.17	0.33	0.10	0.05
TOX 4 (mg/l)	< 0.01	0.14	0.14	0.45	0.10	0.14
pH 1 (lab units)	7.30	7.68	7.28	7.18	7.30	7.43
pH 2 (lab units)	7.28	7.71	7.33	7.15	7.31	7.42
pH 3 (lab units)	7.32	7.64	7.30	7.17	7.31	7.46
pH 4 (lab units)	7.26	7.62	7.19	7.19	7.31	7.43
EC 1 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1300.00	1400.00
EC 2 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1400.00	1400.00
EC 3 (umhos/cm)	1200.00	1900.00	1600.00	1500.00	1500.00	1400.00
EC 4 (umhos/cm)	1200.00	2000.00	1700.00	1400.00	1400.00	1400.00
TOC 1 (mg/l)	< 1.00	< 1.00	4.00	11.00	90.00	10.00
TOC 2 (mg/l)	< 1.00	< 1.00	4.00	13.00	1.00	9.00
TOC 3 (mg/l)	< 1.00	< 1.00	4.00	12.00	70.00	9.00
TOC 4 (mg/l)	< 1.00	< 1.00	3.00	12.00	1.00	9.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

April 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03*	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11*
Chloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromomethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Vinyl Chloride	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Methylene Chloride	< 1.00	< 1.00	< 5.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichlorofluoromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1-Dichloroethene	< 1.00	< 1.00	23.00	55.00	< 1.00	< 1.00	= 1.00	< 1.00	6.00	4.00	< 1.00	20.00
1,1-Dichloroethane	< 1.00	< 1.00	11.00	92.00	< 1.00	< 1.00	< 1.00	4.00	36.00	5.00	< 1.00	8.80
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	2.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroform	< 1.00	< 1.00	35.00	12.00	< 1.00	73.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00
1,2-Dichloroethane	< 1.00	< 1.00	36.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	8.00	< 1.00	12.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Carbon Tetrachloride	< 1.00	< 1.00	47.00	< 5.00	< 1.00	140.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromodichloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichloropropane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichloroethene	23.00	45.00	110.00	280.00	7.00	65.00	37.00	47.00	23.00	24.00	23.00	39.00
Dibromochloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromoform	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Tetrachloroethene	4.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	3.00	2.00	< 1.00	< 1.00	5.00	< 5.00
1,1,2,2-Tetrachloroethane	NR	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	NR	NR	< 1.00	< 1.00	NR	< 5.00
Chlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00

< Denotes non-detection at indicated detection limit

= Compound concentration is equal to detection limit

* Duplicate sample analytical results (performed by CKY)

NR Denotes not reported, compound coelutes with Tetrachloroethene and is combined with that result.

Note: All results in micrograms per liter (ug/l)

Laboratory analysis performed by ENSECO except where noted

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 1.00	< 50.00	< 5.00	< 0.70	< 1.00	< 0.70	< 0.70	< 1.00	< 0.70	< 0.70	< 500.00
Toluene	< 1.00	< 1.00	< 50.00	23.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	7500.00
Ethylbenzene	< 1.00	< 1.00	1200.00	15.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	2600.00
Xylenes, Total	3.00	< 1.00	60.00	50.00	< 1.00	< 1.00	< 1.00	= 1.00	< 1.00	< 1.00	7.00	11000.00

< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ENSECO

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, total	0.10	0.05	0.07	100.00	0.05	0.04	0.06	= 0.02	0.03	0.06	0.08	0.04
Copper	< 0.02	< 0.02	< 0.02	= 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium, hexavalent	< 0.05	< 0.05	< 0.05	43.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloride	660.00	150.00	420.00	990.00	120.00	80.00	85.00	180.00	120.00	140.00	270.00	120.00
Nitrate (Nitrogen)	< 0.20	7.00	3.10	0.90	5.50	8.20	8.80	3.40	2.80	4.10	6.30	1.70

January 1989 Monitor Well Results

TABLE 3-1 PRIMARY SAMPLE ANALYSES

				January 1989 Quarterly Sampling								
				Southern California Chemical								
				HALOGENATED VOLATILE ORGANIC COMPOUNDS *								
				(Concentrations in ug/l)								
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
Dichlorodifluoromethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Chloride	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Vinyl Chloride	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Bromide	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Trichlorofluoromethane	ND .05	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethene	ND .01	ND 0.2	ND 0.2	2 2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methylene Chloride	ND 1.0	ND 0.2	3 . 2	1 4	ND 0.2	2 . 1	ND 0.2	2 . 2	ND 0.2	1 6	ND 0.2	1
trans-1,2-Dichloroethene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethane	ND .01	ND 0.2	4 . 4	3 6	ND 0.2	ND 0.2	ND 0.2	2 . 9	3 0	3 4	2 . 8	3 . 2
Chloroform	0 . 2	ND 0.2	1 3	3 . 7	ND 0.2	7 . 4	ND 0.2	ND 0.2	ND 0.2	8 . 9	ND 0.2	0 . 8 8
1,1,1-Trichloroethane	ND .01	ND 0.2	ND 0.2	0 . 6 8	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	2 . 9	ND 0.2	ND 0.2
Carbon Tetrachloride	ND .01	ND 0.2	1 5	ND 0.2	ND 0.2	5 . 6	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichloroethane	0 . 7	ND 0.2	2 4 0	2 0	ND 0.2	2 9	ND 0.2	ND 0.2	ND 0.2	4 . 3	3 . 7	2 1
Trichloroethene	1 9	6 0	7 4	1 2 0	6 . 7	5 . 9	5 7	3 5	6 9	5 5	3 2	3 4
1,2-Dichloropropane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Dichlorobromoethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
2-Chloroethylvinylether	ND 10.0	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
cis-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
trans-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2-Trichloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Tetrachloroethene	2 . 8	1 . 8	4 . 6	1 . 6	ND 0.2	ND 0.2	7	2 . 1	4 . 3	3 . 1	1 . 2	ND 0.2
Dibromochloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Bromoform	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2,2-Tetrachloroethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,3-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,4-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, Colorado.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

				January 1989 Quarterly Sampling								
				Southern California Chemical								
	AROMATIC VOLATILE ORGANICS, TOTAL ORGANIC CARBON & TOTAL ORGANIC HALOGENS											
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
PURGEABLE AROMATICS *												
(Concentrations in ug/l)												
1,3-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,4-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,2-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Total Xylenes	ND .01	ND 0.5	1500	29	1.3	ND 1.0	ND 1.0	3.6	1.6	ND 1.0	ND 1.0	1.5
Benzene	ND .01	ND 0.5	7.4	ND 0.5	ND 0.5	0.9	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Toluene	ND .01	ND 0.5	17	10	ND 0.5	ND 0.5	ND 0.5	1.4	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Ethylbenzene	ND .01	ND 0.5	4900	15	ND 0.5	ND 0.5	ND 0.5	1.2	ND 0.5	ND 0.5	0.54	43
TOTAL ORGANIC CARBON **												
(Concentrations in mg/l)												
TOC #1	6.9	ND 0.5	160.0	16.0	ND 0.5	65.0	ND 0.5	3.6	1.1	2.1	2.0	5.4
TOC #2	7.8	ND 0.5	160.0	14.0	ND 0.5	64.0	ND 0.5	3.7	1.2	1.7	1.9	5.8
TOC #3	7.1	ND 0.5	160.0	14.0	ND 0.5	63.0	ND 0.5	3.6	1.2	1.8	2.0	5.3
TOC #4	7.6	ND 0.5	160.0	13.0	ND 0.5	63.0	ND 0.5	3.5	1.2	1.5	2.0	5.2
TOTAL ORGANIC HALOGEN **												
(Concentrations in ug/l)												
TOX #1	62	50	220	360	49	58	46	90	130	180	38	58
TOX #2	42	47	230	260	38	42	48	42	110	170	36	38
TOX #3	41	57	220	270	19	42	36	80	92	170	33	40
TOX #4	45	39	220	300	29	37	46	130	130	150	51	46

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, CO; ** Analyzed by Montgomery Laboratories.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

			January 1989 Quarterly Sampling									
			Southern California Chemical									
			METALS, pH AND ELECTRIC CONDUCTIVITY *									
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
METALS (mg/l)												
Chromium VI (hex)	ND .01	0.017	ND .01	33.0	0.01	ND .010	ND .010	ND .010	ND .010	0.45	ND .010	ND .010
Chlorine	524.0	77.0	302.0	418.0	105.0	98.0	66.0	744.0	145.0	248.0	139.0	110.0
Nitrate (N)	5.2	7.4	0.92	ND 0.2	5.9	0.3	8.7	5.4	5.4	7.8	0.43	2.0
Nitrate (NO3)	22.9	33.0	4.0	ND 0.9	26.0	1.3	38.0	24.0	24.0	34.0	1.9	8.8
Chromium (total)	0.014	0.022	ND .014	400	ND .014	ND .014	ND .014	ND .014	ND .014	0.33	0.029	ND .014
Cadmium	ND .003	ND .003	ND .003	0.028	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003
Zinc	0.015	ND .006	ND .006	0.007	0.008	ND .006	0.021	ND .006	0.009	0.008	ND .006	ND .006
Copper	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009
pH												
Analysis #1	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #2	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #3	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #4	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
EC (umohs/cm)												
Analysis #1	2530	1320	1950	2120	1470	1370	1290	3390	1420	1700	1410	1480
Analysis #2	2500	1320	1890	2120	1470	1370	1290	3390	1420	1680	1410	1480
Analysis #3	2520	1320	1900	2120	1470	1370	1290	3390	1430	1680	1410	1480
Analysis #4	2560	1320	1890	2120	1470	1370	1290	3390	1430	1680	1410	1480

* Analyzed by Montgomery Laboratories.

Kleinfelder Analytical Data

TABLE 1
WATER-QUALITY DATA
MONITORING WELL #1
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED											
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.1		7.2	7.0	7.38	6.8	7.0	6.9	7.1		7.05	
TOC (mg/l)	3.7		19		35	21	ND 3	ND 3	13	32	10		8.5	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.1		0.038	
Sp. Cond. (umhos/cm)	2300		3400		1650	3600	3200	2800	3400	3800	2975		2500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.08	ND.02	0.03	0.07
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.03	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.02	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.01	ND.04	ND.04	ND.02	0.10	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		0.18		0.04	ND.08	0.018	ND.03	0.06	ND.03	0.04		0.07	0.08
Chloride (mg/l)	330		300		650	920	700	570	720	770	430		460	630
Nitrate as N (mg/l)	7.0		3.7		0.5	1.3	4.06	5.3	ND.1	2.3	4.5		5.2	2.9
Nitrate as NO_3 (mg/l)	31		17		18	11	18	23	ND.4	11	19		23	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1		ND1	2	1	0.5	1	1	ND1			ND1	
Benzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7			ND.7	
Carbon Tetrachloride (ug/l)		NO1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Chloroform (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Ethylbenzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Trichloroethylene (ug/l)		16		16	18	18	9	11	2.4	4			15	
Toluene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Xylene (ug/l)		ND1		ND1	NO1		ND.5	ND.5	ND.5	ND1			ND1	
Methylene Chloride (ug/l)		ND1		ND1	ND1	ND1	ND2	ND.5	1.7	ND1			ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 2
WATER-QUALITY DATA
MONITORING WELL #2
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.0		7.4		7.7	7.4	7.68	7.1	7.1	7.12	7.27		7.35	
TOC (mg/l)	34		4.8		ND3	ND3	ND3	ND3	ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.04		0.032	
Sp. Cond. (umhos/cm)	2300		1900		1800	2100	2280	1900	3400	1500	1550		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.05	ND.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.03		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.03	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		ND.03		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	0.03		ND.02	0.03
Chloride (mg/l)	270		180		220	410	510	250	700	180	110		160	160
Nitrate as N (mg/l)	2.1		5.8		5.4	5.0	6.25	7.2	8.8	7.2	7.2		7.2	7.1
Nitrate as NO_3 (mg/l)	9.1		26		24	22	27.7	32	39	32	32		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)											
1,1-Dichloroethane (ug/l)	4	3	ND1	5	9	21	20	2.5	ND1		ND1
1,1-Dichloroethylene (ug/l)	3	ND1	ND1	3	5	0.9	11	0.94	ND1		ND1
1,2-Dichloroethane (ug/l)	ND1	ND1	3	1	ND1	ND.5	2.2	ND.5	ND1		ND1
Benzene (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7
Carbon Tetrachloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Chloroform (ug/l)	ND1	ND1	ND1	2	2	1	ND.5	0.73	ND1		ND1
Ethylbenzene (ug/l)	ND1	ND1	3	2	ND1	ND.5	6.2	ND.5	ND1		ND1
Trichloroethylene (ug/l)	21	22	12	38	67	20	93	40	5		23
Toluene (ug/l)	ND1	ND1	3	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Xylene (ug/l)	ND1	ND1	2	ND1		ND.5	ND.5	ND.5	ND1		ND1
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND2	ND.5	11	ND1		ND1

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 3
WATER-QUALITY DATA
MONITORING WELL #3
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.4		7.0		7.2	7.2	7.55	6.9	7.0	5.9	6.78		7.10	
TOC (mg/l)	16		190		44	29	31	20.5	21	50	135		81	
TOX (mg/l)	0.17		ND.08		.18	.17	.21	.22	.15	.27	.10		0.24	
Sp. Cond. (umhos/cm)	1700		1500		2200	2200	2400	2300	2200	3300	1575		2100	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	ND.02	ND.02	0.07
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002	ND.011	ND .009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		0.02	0.02
Zinc (mg/l)	ND.019		0.26		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	ND.02		0.04	0.02
Chloride (mg/l)	170		76		400	520	550	420	380	740	190		350	840
Nitrate as N (mg/l)	3.0		ND 1		6.5	4.1	4.81	3.4	3.8	5.2	ND.2		2.7	4.8
Nitrate as NO_3 (mg/l)	13		ND4.4		29	18	21.3	15	17	23	ND1		12	

Note: ND 1 = Chemical was not detected at 1 mg/l.

	Organic Compounds (EPA Method 624)												
1,1-Dichloroethane (ug/l)	6	ND50	5	4	5	5	4	1.6	6.9	ND10		ND50	ND25
1,1-Dichloroethylene (ug/l)	14	ND50	11	7	13	17	7.8	3.9	15	ND10		ND50	ND25
1,2-Dichloroethane (ug/l)	ND1	ND50	9	6	7	11	18	2.11	ND.5	36		ND50	ND25
Benzene (ug/l)	9	ND50	3	ND1	3	2	ND.5	ND.5	ND.5	ND10		ND35	ND17
Carbon Tetrachloride (ug/l)	73	ND50	78	110	58	87	50	73	87	ND10		ND50	ND25
Chloroform (ug/l)	46	ND50	36	97	33	45	20	22	ND.5	ND10		ND50	ND25
Ethylbenzene (ug/l)	ND1	95000	1100	ND1	310	4	ND.5	ND.5	290	8500		1700	1000
Trichloroethylene (ug/l)	320	ND50	160	170	200	160	98	70	150	14		150	150
Toluene (ug/l)	2	15000	11	ND1	ND1	ND1	ND.5	ND.5	ND.5	8500		550	ND25
Xylene (ug/l)	ND1	20000	2000	ND1	10		ND.5	ND.5	ND.5	23000		850	200
Methylene Chloride (ug/l)	ND1	ND50	ND1	ND1	2	ND1	ND2	ND2	9.6	ND10		ND50	100

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 4
WATER-QUALITY DATA
MONITORING WELL #4
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.3		7.1		7.1	6.6	7.4	6.7	6.3	6.3	6.6		6.55	
TOC (mg/l)	36		26		110	79	98	26.5	133	90	46		57	
TOX (mg/l)	ND .05		.26		.19	2.3	1.40	.68	2.10	1.3	.36		0.73	
Sp. Cond. (umhos/cm)	6400		3600		3500	4250	4950	4000	11000	7300	4625		5900	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	500	550	61		120	180	170	98	440	190	140	238	218	180
Chromium (HEX) (mg/l)	500	500			120	180	170	100	430	232	140		84	170
Cadmium (mg/l)	0.78	0.92	0.035		0.04	0.09	0.07	0.05	ND .01	.33	.06		0.13	0.12
Copper (mg/l)	ND .08		ND .02		ND .02	ND .04	ND .03	ND .02	ND .02	ND .02	ND .03		0.04	ND.02
Zinc (mg/l)	0.06		ND .03		ND .04	ND .08	ND .007	ND .03	ND .03	ND .03	ND .03		0.15	ND.02
Chloride (mg/l)	2300		1100		770	1300	1400	960	3500	1800	790		1600	1400
Nitrate as N (mg/l)	18	12	ND 13		0.5	1.3	1.1	ND .1	ND .7	1.3	.2		0.75	3.9
Nitrate as NO_3 (mg/l)	81	55	ND 55		2.4	5.6	5.0	ND .4	ND 3	5.8	1.1		3.3	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	100	100	42	57	61	120	27	110	120	70			130	100
1,1-Dichloroethylene (ug/l)	100	42	34	41	61	67	20	94	110	56			60	50
1,2-Dichloroethane (ug/l)	ND 50	17	34	61	12	140	74	74	100	35			90	70
Benzene (ug/l)	ND 50	16	9	ND 1	ND 10	5	ND 5	ND 5	ND .5	ND 14			20	ND.7
Carbon Tetrachloride (ug/l)	ND 50	ND 1	ND 1	ND 1	ND 10	ND 1	ND 5	ND 5	1.5	ND 20			ND 10	ND10
Chloroform (ug/l)	ND 50	7	3	8	10	12	6.2	30	23	ND 20			23	ND10
Ethylbenzene (ug/l)	3000	36	50	1100	670	220	160	1500	380	70			40	ND10
Trichloroethylene (ug/l)	550	140	170	200	280	290	180	280	190	110			250	250
Toluene (ug/l)	8300	130	25	330	260	220	240	3700	580	180			90	ND10
Xylene (ug/l)	10000	100	30	300	300	300	731	2700	570	200			120	40
Methylene Chloride (ug/l)	100	12	ND 1	17	ND 10	ND 1	27	140	110	ND 20			110	70

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 5
WATER-QUALITY DATA
MONITORING WELL #4A
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.5		7.6	7.5	7.7		7.7	7.2	7.3		7.45	
TOC (mg/l)		40	8.3		ND3	ND3	ND3		ND3	ND3	ND1		ND1	
TOX (mg/l)		ND.05	ND.08		ND.08	ND.08	ND.08		.14	ND.03	ND.01		0.15	
Sp. Cond. (umhos/cm)		1500	1500		850	1400	1525		1600	1700	1662		1550	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03		ND.04	ND.04	.03	.02	ND.02	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02		ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01		ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03		ND.02	ND.02	ND.02		0.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007		ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)			100		110	120	130		160	129	97		100	160
Nitrate as N (mg/l)		4.5	7.5		6.1	4.7	6.3		5.4	6.1	3.8		6.1	6.3
Nitrate as NO_3 (mg/l)		20	33		27	21	28		24	27	17		27	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			13		11	3	19		140	1.2	ND1		ND10	
1,1-Dichloroethylene (ug/1)			1		2	ND1	2		50	ND.5	ND1		ND10	
1,2-Dichloroethane(ug/l)			ND1		ND1	ND1	2		1.5	ND.5	ND1		ND10	
Benzene (ug/l)			8		ND1	ND1	ND1		ND.5	ND.5	ND.7		ND7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Chloroform (ug/l)			ND1		ND1	ND1	2		17	ND.5	ND1		ND10	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Trichloroethylene (ug/l)			8		7	3	12		82	3.2	ND1		ND20	
Toluene (ug/l)			ND1		ND1	ND1	ND1		1.5	ND.5	ND1		ND10	
Xylene (ug/l)			ND1		ND1	ND1			ND.5	ND.5	ND1		ND10	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1		11	ND.5	ND1		100	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 6
WATER-QUALITY DATA
MONITORING WELL #5
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.4		7.3	7.3	7.82	6.9	7.0	7.6	7.06		7.10	
TOC (mg/l)	ND3		4.8		5	3	ND3	ND3	ND3	5	7		21	
TOX (mg/l)	.19		.16		.65	.18	.30	.45	.36	ND.03	.3		0.13	
Sp. Cond. (umhos/cm)	1700		1200		1400	1100	1220	1400	1400	1300	1537		1400	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.1	ND.02	0.05	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.019		0.18		ND.04	ND.08	ND.001	ND.031	ND.03	ND.03	.4		ND.02	ND.02
Chloride (mg/l)	2.0		66		79	290	143.5	110	110	100	90		91	93
Nitrate as N (mg/l)	0.42		8.8		12	8.6	11.13	10	15	3.4	5		14	3.6
Nitrate as NO_3 (mg/l)	1.9		39		55	38	49.3	45	65	24	22		3.1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	ND1	ND 1	2	2	7	4	5.4	.29	ND1		ND1		
1,1-Dichloroethylene (ug/l)	ND1	ND1	3	3	4	2.7	5.2	.25	ND1		ND1		
1,2-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.3	ND1		7		
Benzene (ug/l)	5	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7		
Carbon Tetrachloride (ug/l)	3	11	45.5	37	68	100	120	99	20		26		
Chloroform (ug/l)	2	10	14.5	16	43	48	50	95	10		18		
Ethylbenzene (ug/l)	ND1	ND1	ND1	6	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Trichloroethylene (ug/l)	10	24	64	36	70	70	59	26	5		18		
Toluene (ug/l)	1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Xylene (ug/l)	ND1	ND1	ND1	ND1		ND.5	7.3	ND.5	ND1		ND1		
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND2	ND.5	4.3	ND1		ND1		

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 7
WATER-QUALITY DATA
MONITORING WELL #6B
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.6		7.4		7.5	7.8	7.6	7.1	7.4	7.1	7.13		7.10	
TOC (mg/l)	ND3		6.5		ND3	ND3	ND3	ND3	ND3	9	ND1		ND1	
TOX (mg/l)	0.1		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.03	.02		ND.01	
Sp. Cond. (umhos/cm)	1400		1300		1400	1200	1425	1400	1600	1400	1265		1300	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	0.0038		ND.03		ND .03	ND.02	ND.03	ND.04	ND.04	ND.04	.02	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.09	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.03		ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		.02	ND.02
Chloride (mg/l)	79		220		82	100	140	92	130	94	61		89	100
Nitrate as N (mg/l)	6.9		8.8		7.0	5.2	6.1	7	8.4	8.4	8.4		7.3	8.0
Nitrate as NO_3 (mg/l)	28		39		31	23	27	31	37	37	37		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)										
1,1-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
1,1-Dichloroethylene (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
1,2-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Benzene (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7
Carbon Tetrachloride (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Chloroform (ug/l)	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Ethylbenzene (ug/l)	ND1	ND1	ND1	ND1	ND.5	1.5	ND.5	ND1		ND1
Trichloroethylene (ug/l)	30	19	23.5	24	21	20	33	22		21
Toluene (ug/l)	ND1	ND1	ND1	ND1	ND.5	0.8	ND.5	ND1		ND1
Xylene (ug/l)	ND1	ND1	ND1		ND.5	7.9	ND.5	ND1		ND1
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND.5	2.6	1.2	ND1		ND1

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 8
WATER-QUALITY DATA
MONITORING WELL #7
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.3	7.3		7.4	7.2	7.3	6.5	6.8	7.3	8.94		6.95	
TOC (mg/l)		260	6.5		5	17	ND3	43	7	5	2		4.9	
TOX (mg/l)		0.081	ND.08		ND.08	ND.08	ND.08	ND.08	.11	ND.03	.08		0.18	
Sp. Cond. (umhos/cm)		2700	1700		1900	5600	5850	3700	3300	5000	8500		2800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.02	ND.02	0.07	0.04
Chromium (HEX) (mg/l)		ND.5	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	0.08	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.04	0.022	ND.03	0.04	ND.03	ND.02		ND.02	ND.02
Chloride (mg/l)		380	190		280	1800	1700	630	610	1200	1900		570	1400
Nitrate as N (mg/l)		27	5.0		4.3	2.7	4.4	19	25	1.1	ND0.2		ND.2	5.5
Nitrate as NO_3 (mg/l)		120	22		19	12	19.5	82	110	19	ND1		ND1	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		2			8	42	30	7.1	14	6	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			2	5	6	ND5	6	.55	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	2	ND1	ND5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		64			ND1	ND1	ND1	ND5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	8.2	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			4	ND1	ND1	1.0	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		29			67	71	70	180	130	35	24		100	
Toluene (ug/l)		2			5	ND1	ND1	2.2	3.6	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			4	ND1		ND5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	1.1	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 9
WATER-QUALITY DATA
MONITORING WELL #8
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.5		7.4	7.4	7.4	6.9	7.1	7.1	7.23		7.25	
TOC (mg/l)		99	7		8	ND3	ND3	ND3	5	ND3	ND1		1.5	
TOX (mg/l)		0.44	.09		ND.08	.10	.15	ND.08	.19	ND.08	.04		.06	
Sp. Cond. (umhos/cm)		2800	1500		1700	1600	1800	2000	2100	1300	1550		1,600	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.05	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.03	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		0.05	0.04
Chloride (mg/l)			530		170	270	250	300	300	120	140		190	130
Nitrate as N (mg/l)		1.3	4.2		3.2	2.7	3.2	2.5	2.2	4.3	4.5		3.7	5.7
Nitrate as NO_3 (mg/l)		5.8	39		14	12	14.1	11	10	19	20		16	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		41	76	160	160	55	160	45	50		42	2	
1,1-Dichloroethylene (ug/l)		3	8	17	19	5.6	29	5.5	2.8		6	ND1	
1,2-Dichloroethane (ug/l)		1	14	14	8	9.5	16	ND.5	ND1		3	30	
Benzene (ug/l)		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	ND.7	
Carbon Tetrachloride (ug/l)		ND1	ND1	ND1	8	ND.5	ND.5	ND.5	ND1		ND1	ND1	
Chloroform (ug/l)		ND1	2	2	2	5.6	ND.5	0.55	ND1		ND1	ND1	
Ethylbenzene (ug/l)		ND1	2	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	ND1	
Trichloroethylene (ug/l)		19	28	52	44	67	51	25	17		27	20	
Toluene (ug/l)		ND1	3	ND1	ND1	2.3	ND.5	ND.5	ND1		ND1	ND1	
Xylene (ug/l)		ND1	1	ND1		ND.5	ND.5	ND.5	ND1		ND1	ND1	
Methylene Chloride (ug/l)		5	ND1	ND1	ND1	ND.5	2.4	3.0	ND1		ND1	ND1	ND1

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 10
WATER-QUALITY DATA
MONITORING WELL #9
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.4	7.4		7.3	7.0	7.4	6.9	6.8	6.9	7.15		7.0	
TOC (mg/l)		210	14		28	2.8	24	ND3	42	15	3		4.0	
TOX (mg/l)		0.13	.26		.12	.28	.37	.37	.48	.28	.16		0.22	
Sp. Cond. (umhos/cm)		2200	2800		2000	2400	2675	2500	3200	3100	2075		1950	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	0.12	.94	1.30	2.42	1.66	2.75
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	0.05	ND.02	ND.02	0.05	.59	1.30		0.8	1.5
Cadmium (mg/l)		ND.01	ND.00		ND.01	ND1	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	0.018	ND.03	ND.03	ND.03	ND.02		0.05	0.03
Chloride (mg/l)		300	530		250	720	670	470	640	630	290		290	490
Nitrate as N (mg/l)		1.4	8.8		3.2	1.4	3.72	4.1	2.9	8.4	7.2		5.0	7.6
Nitrate as NO_3 (mg/l)		6.3	39		14	6.2	16.5	18	13	37	32		22	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			99		50	360	250	110	140	130	40		ND10	90
1,1-Dichloroethylene (ug/l)			18		18	200	110	44	72	84	50		29	30
1,2-Dichloroethane (ug/l)			10		13	90	52	90	69	ND.5	6		90	ND10
Benzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND.7		ND7	ND7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Chloroform (ug/l)			20		4	30	22	10	19	28	13		ND10	10
Ethylbenzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Trichloroethylene (ug/l)			61		3	550	240	150	160	150	17		120	90
Toluene (ug/l)			ND1		ND1	ND5	ND1	0.7	ND2.5	ND.5	ND1		ND10	ND10
Xylene (ug/l)			ND1		ND1	ND5		ND.5	ND2.5	ND.5	ND1		ND10	ND10
Methylene Chloride (ug/l)			110		ND1	ND5	18	29	33	83	35		ND10	10

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 11
WATER-QUALITY DATA
MONITORING WELL #10
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED 2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.8		7.6	7.4	7.8	7.4	7.2	7.1	7.51		7.20	
TOC (mg/l)		440	10		130	103	135	33.8	158	56	7		29	
TOX (mg/l)		0.17	ND.08		ND.08	.14	.15	.20	.62	.18	.06		0.22	
Sp. Cond. (umhos/cm)		2100	1300		1600	1400	1550	1600	2100	1900	1355		1800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	.05	0.05	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		0.05	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		0.35	ND.02
Chloride (mg/l)			150		120	150	160	160	260	230	100		210	230
Nitrate as N (mg/l)		ND.1	ND.1		0.1	ND.01	ND.1	ND.1	ND.1	ND.1	ND.2		ND.2	ND.2
Nitrate as NO_3 (mg/l)		ND4.4	ND4.4		0.6	ND.04	ND.4	ND.4	ND.4	ND.4	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND50	2		6	ND10	20	ND5	23	21	3.7		32	ND5
1,1-Dichloroethylene (ug/l)		ND50	1		7	14	ND20	ND5	41	28	ND1		21	ND5
1,2-Dichloroethane (ug/l)		ND50	17		86	200	270	63	160	93	15		70	40
Benzene (ug/l)		ND50	ND1		ND1	ND10	ND20	ND5	ND2.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)		ND50	ND1		ND1	ND10	ND20	ND5	ND2.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)		50	ND1		ND1	ND10	ND20	ND5	3.1	2.3	ND1		ND10	ND5
Ethylbenzene (ug/l)		6500	68		ND1	2200	1800	330	2000	360	ND1		ND10	ND5
Trichloroethylene (ug/l)		250	29		56	93	120	62	160	130	14		90	60
Toluene (ug/l)		17000	ND1		ND1	36	560	ND5	14	ND.5	ND1		ND10	ND5
Xylene (ug/l)		20000	ND1		70	90	600	120	500	ND.5	ND1		ND10	ND5
Methylene Chloride (ug/l)		100	ND1		ND1	ND10	ND20	ND5	13	1.8	ND1		ND10	14

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 12
WATER-QUALITY DATA
MONITORING WELL #11
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.8		7.2	7.3	7.5	7.5	7.4	7.4	7.34		7.45	
TOC (mg/l)		54	13		120	156	125	26.8	58	61	12		20	
TOX (mg/l)		ND.05	0.1		ND.08	ND.08	.12	.14	.15	ND.08	.07		0.078	
Sp. Cond. (umhos/cm)		1600	1600		1700	1600	1800	1700	2100	1600	1895		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.04	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.01	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)		220	230		180	230	240	170	270	110	86		120	110
Nitrate as N (mg/l)		1.2	2.5		1.1	ND1	0.1	1.2	0.7	1.5	2.2		1.5	1.7
Nitrate as NO_3 (mg/l)		5.2	11		4.8	ND.4	0.5	5.5	3.3	6.8	9.6		65	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			10	4	10	ND200	ND100	6.9	12	2.3	2.5		ND10	ND5
1,1-Dichloroethylene (ug/l)			8	2	5	ND200	ND100	5.0	11	2.6	2.3		ND10	ND5
1,2-Dichloroethane (ug/l)			8	31	17	ND200	130	95	21	89	21		ND10	60
Benzene (ug/l)			ND1	3	ND1	ND200	ND100	1.5	ND.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)			ND1	ND1	ND1	ND200	ND100	ND.5	ND.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)			3	3	10	ND200	ND100	3.3	3.5	1.0	ND1		ND10	ND5
Ethylbenzene (ug/l)			13	1800	2200	6400	3300	ND.5	1200	180	17		ND10	130
Trichloroethylene (ug/l)			110	36	76	ND200	180	46	81	36	20		70	30
Toluene (ug/l)			ND1	5400	5200	14000	7500	3.6	360	ND.5	ND1		ND10	ND5
Xylene (ug/l)			20	4000	1500	10000	3000	220	370	ND.5	ND1		110	ND5
Methylene Chloride (ug/l)			ND1	ND1	ND1	ND200	ND100	1.8	8.4	ND.5	3		ND10	16

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

APPENDIX C

ATI ANALYTICAL REPORTS

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 004134

April 30, 1990

Camp Dresser & McKee Inc.
18881 Vonkarmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

Attention: Bill Grove

On April 10, 1990, Analytical Technologies, Inc. received five water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

TJF:bc

cc: E.E. Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670

Analytical Technologies, Inc.

ATI I.D. 004134

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/ELCD	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/10/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL REPORT DATE : 04/30/90
ATI I.D. : 004134

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC-MW01-007	WATER	04/10/90
02	SCC-MW02-007	WATER	04/10/90
03	SCC-MW11-007	WATER	04/10/90
04	SCC-EB01-007	WATER	04/10/90
05	TRIP BLANK	WATER	04/10/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 004134

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL

DATE RECEIVED : 04/10/90
REPORT DATE : 04/30/90

PARAMETER	UNITS	01	02	03	04
CHLORIDE	MG/L	475	140	115	<2.0
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02	<0.02	<0.02
NITRATE AS NITROGEN	MG/L	1.2	1.5	2.1	<0.05

NOTE: Chromium hexavalent was analyzed on 04/10/90. Chloride and nitrate as nitrogen were analyzed on 04/11/90.

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL ATI I.D. : 004134

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00413404	<2.0	<2.0	0	40	40	100
CHROMIUM HEXAVALENT	MG/L	00413404	<0.02	<0.02	0	0.24	0.25	96
NITRATE AS NITROGEN	MG/L	00413605	<0.05	<0.05	0	1.9	2.0	95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 004134

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL

DATE RECEIVED : 04/10/90
REPORT DATE : 04/30/90

PARAMETER	UNITS	01	02	03	04
CADMIUM	MG/L	<0.005	<0.005	<0.005	<0.005
CHROMIUM	MG/L	0.02	0.02	<0.01	<0.01
COPPER	MG/L	0.02	<0.02	<0.02	<0.02
ZINC	MG/L	0.02	0.01	<0.01	0.02

NOTE: The samples were analyzed for metals on 04/23/90.

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL ATI I.D. : 004134

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00413402	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00413402	0.02	0.01	67	1.9	2.0	94
COPPER	MG/L	00413402	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00414901	<0.01	<0.01	0	1.0	1.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00413401

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/10/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/10/90
PROJECT NAME	: SO CAL CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW01-007	DATE ANALYZED	: 04/19/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<5.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	3.8
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	20
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	94
TRIFLUOROTOLUENE (%)	106

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00413402

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/10/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/10/90
PROJECT NAME	: SO CAL CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW02-007	DATE ANALYZED	: 04/19/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	36
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	94
TRIFLUOROTOLUENE (%)	106

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00413403

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/10/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/10/90
PROJECT NAME	: SO CAL CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW11-007	DATE ANALYZED	: 04/20/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<5.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	23
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	370
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	2.6
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	33
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	150

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	105
TRIFLUOROTOLUENE (%)	111

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00413404

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/10/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/10/90
PROJECT NAME	: SO CAL CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-EB01-007	DATE ANALYZED	: 04/19/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<5.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	<1.0
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
TRIFLUOROTOLUENE (%)	101

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00413405

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/10/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/10/90
PROJECT NAME	: SO CAL CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: TRIP BLANK	DATE ANALYZED	: 04/19/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	107

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004134
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/19/90
PROJECT NAME	: SO CAL CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004134
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/19/90
PROJECT NAME	: SO CAL CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004134

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/20/90
PROJECT NAME	: SO CAL CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00413505	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	1.4	70	1.7	85	19
CHLOROBENZENE	<0.50	2.00	2.2	110	2.4	120	9
1,1-DICHLOROETHENE	<0.20	2.00	2.2	110	2.3	115	4
TRICHLOROETHENE	<0.20	2.30	2.4	104	2.4	104	0
TETRACHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
BENZENE	<0.50	2.00	2.1	105	2.2	110	5
TOLUENE	<0.50	2.00	2.2	110	2.3	115	4

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004134

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/19/90
PROJECT NAME	: SO CAL CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00415607	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	2.4	120	2.3	115	4
CHLOROBENZENE	<0.50	2.00	2.1	105	2.1	105	0
1,1-DICHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
TRICHLOROETHENE	<0.20	2.00	2.2	110	2.1	105	5
TETRACHLOROETHENE	<0.20	2.00	2.0	100	2.0	100	0
BENZENE	<0.50	2.00	1.9	95	1.9	95	0
TOLUENE	<0.50	2.00	2.0	100	2.1	105	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004134

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/26/90
PROJECT NAME	: SO CAL CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00416506	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.00	4.7	118	4.7	118	0
CHLOROBENZENE	<0.50	4.00	4.0	100	3.9	98	2
1,1-DICHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
TRICHLOROETHENE	<0.20	4.50	4.8	107	4.8	107	0
TETRACHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
BENZENE	<0.50	4.00	4.1	102	4.1	102	0
TOLUENE	<0.50	4.00	4.2	105	4.2	105	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9...

ATI I.D. 004149

May 1, 1990

Camp Dresser & McKee Inc.
18881 Vonkarmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No: 2279-111-GW-SAMP

P.O. No.: 34050

Attention: Bill Grove

On April 11, 1990, Analytical Technologies, Inc. received five water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

TJF:nm

cc: E.E. Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670

Analytical Technologies, Inc.

ATI I.D. 004149

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/ELCD	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/11/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CALIFORNIA CHEMICAL REPORT DATE : 05/01/90
ATI I.D. : 004149

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC-MW03-007	WATER	04/11/90
02	SCC-MW04-007	WATER	04/11/90
03	SCC-MW31-007	WATER	04/11/90
04	SCC-SP01-007	WATER	04/11/90
05	SCC-TB02-007	WATER	04/03/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 004149

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CALIFORNIA CHEMICAL

DATE RECEIVED : 04/11/90
REPORT DATE : 05/01/90

PARAMETER	UNITS	01	02	03	04
CHLORIDE	MG/L	360	1000	1020	-
CHROMIUM HEXAVALENT	MG/L	<0.02	81.7	82.3	0.91
NITRATE AS NITROGEN	MG/L	2.6	<0.20	<0.20	-

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CALIFORNIA CHEMICAL ATI I.D. : 004149

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00415603	595	590	1	630	40	94
CHROMIUM HEXAVALENT	MG/L	00414904	0.91	0.93	2	1.17	0.25	100
NITRATE AS NITROGEN	MG/L	00414901	2.6	2.8	7	6.7	4.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 004149

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CALIFORNIA CHEMICAL

DATE RECEIVED : 04/11/90
REPORT DATE : 05/01/90

PARAMETER	UNITS	01	02	03	04
CADMIUM	MG/L	<0.005	0.13	0.13	0.54
CHROMIUM	MG/L	<0.01	80.7	77.6	4.8
COPPER	MG/L	<0.02	0.02	0.02	1.5
ZINC	MG/L	<0.01	<0.01	<0.01	3.1

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CALIFORNIA CHEMICAL ATI I.D. : 004149

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00413402	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00413402	0.02	0.01	67	1.9	2.0	94
COPPER	MG/L	00413402	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00414901	<0.01	<0.01	0	1.0	1.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00414901

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/11/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/11/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW03-007	DATE ANALYZED	: 04/23/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 100

COMPOUNDS	RESULTS
BENZENE	<50
BROMODICHLOROMETHANE	<20
BROMOFORM	<100
BROMOMETHANE	<20
CARBON TETRACHLORIDE	87
CHLOROBENZENE	<50
CHLOROETHANE	<20
CHLOROFORM	<20
CHLOROMETHANE	<20
DIBROMOCHLOROMETHANE	<20
1,2-DICHLOROBENZENE	<50
1,3-DICHLOROBENZENE	<50
1,4-DICHLOROBENZENE	<50
DICHLORODIFLUOROMETHANE	<20
1,1-DICHLOROETHANE	<20
1,2-DICHLOROETHANE	<20
1,1-DICHLOROETHENE	<20
1,2-DICHLOROETHENE (TOTAL)	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRANS-1,3-DICHLOROPROPENE	<20
ETHYLBENZENE	2100
METHYLENE CHLORIDE	<200
1,1,2,2-TETRACHLOROETHANE	<20
TETRACHLOROETHENE	<20
TOLUENE	<50
1,1,1-TRICHLOROETHANE	<20
1,1,2-TRICHLOROETHANE	<20
TRICHLOROETHENE	74
TRICHLOROFLUOROMETHANE	<200
VINYL CHLORIDE	<20
XYLENES (TOTAL)	720

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	97
TRIFLUOROTOLUENE (%)	95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00414902

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/11/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/11/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW04-007	DATE ANALYZED	: 04/20/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
BENZENE	<10
BROMODICHLOROMETHANE	<4.0
BROMOFORM	<20
BROMOMETHANE	<4.0
CARBON TETRACHLORIDE	<4.0
CHLOROBENZENE	<10
CHLOROETHANE	<4.0
CHLOROFORM	6.0
CHLOROMETHANE	<4.0
DIBROMOCHLOROMETHANE	<4.0
1,2-DICHLOROBENZENE	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
DICHLORODIFLUOROMETHANE	<4.0
1,1-DICHLOROETHANE	67
1,2-DICHLOROETHANE	140
1,1-DICHLOROETHENE	35
1,2-DICHLOROETHENE (TOTAL)	<4.0
1,2-DICHLOROPROPANE	<4.0
CIS-1,3-DICHLOROPROPENE	<4.0
TRANS-1,3-DICHLOROPROPENE	<4.0
ETHYLBENZENE	<10
METHYLENE CHLORIDE	54
1,1,2,2-TETRACHLOROETHANE	<4.0
TETRACHLOROETHENE	<4.0
TOLUENE	<10
1,1,1-TRICHLOROETHANE	<4.0
1,1,2-TRICHLOROETHANE	<4.0
TRICHLOROETHENE	280
TRICHLOROFLUOROMETHANE	<40
VINYL CHLORIDE	<4.0
XYLENES (TOTAL)	<20

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	103

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00414903

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/11/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/11/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW31-007	DATE ANALYZED	: 04/20/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
BENZENE	<10
BROMODICHLOROMETHANE	<4.0
BROMOFORM	<20
BROMOMETHANE	<4.0
CARBON TETRACHLORIDE	<4.0
CHLOROBENZENE	<10
CHLOROETHANE	<4.0
CHLOROFORM	6.4
CHLOROMETHANE	<4.0
DIBROMOCHLOROMETHANE	<4.0
1,2-DICHLOROBENZENE	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
DICHLORODIFLUOROMETHANE	<4.0
1,1-DICHLOROETHANE	78
1,2-DICHLOROETHANE	160
1,1-DICHLOROETHENE	45
1,2-DICHLOROETHENE (TOTAL)	<4.0
1,2-DICHLOROPROPANE	<4.0
CIS-1,3-DICHLOROPROPENE	<4.0
TRANS-1,3-DICHLOROPROPENE	<4.0
ETHYLBENZENE	<10
METHYLENE CHLORIDE	58
1,1,2,2-TETRACHLOROETHANE	<4.0
TETRACHLOROETHENE	<4.0
TOLUENE	<10
1,1,1-TRICHLOROETHANE	<4.0
1,1,2-TRICHLOROETHANE	<4.0
TRICHLOROETHENE	320
TRICHLOROFLUOROMETHANE	<40
VINYL CHLORIDE	<4.0
XYLENES (TOTAL)	<20

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	99
TRIFLUOROTOLUENE (%)	107

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00414905

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/03/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/11/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-TB02-007	DATE ANALYZED	: 04/23/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	103
TRIFLUOROTOLUENE (%)	105

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004149
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/22/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004149
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/19/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004149

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/26/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00416506	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.00	4.7	118	4.7	118	0
CHLOROBENZENE	<0.50	4.00	4.0	100	3.9	98	2
1,1-DICHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
TRICHLOROETHENE	<0.20	4.50	4.8	107	4.8	107	0
TETRACHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
BENZENE	<0.50	4.00	4.1	102	4.1	102	0
TOLUENE	<0.50	4.00	4.2	105	4.2	105	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004149

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/19/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00415607	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	2.4	120	2.3	115	4
CHLOROBENZENE	<0.50	2.00	2.1	105	2.1	105	0
1,1-DICHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
TRICHLOROETHENE	<0.20	2.00	2.2	110	2.1	105	5
TETRACHLOROETHENE	<0.20	2.00	2.0	100	2.0	100	0
BENZENE	<0.50	2.00	1.9	95	1.9	95	0
TOLUENE	<0.50	2.00	2.0	100	2.1	105	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004149

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/20/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00413505	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	1.4	70	1.7	85	19
CHLOROBENZENE	<0.50	2.00	2.2	110	2.4	120	9
1,1-DICHLOROETHENE	<0.20	2.00	2.2	110	2.3	115	4
TRICHLOROETHENE	<0.20	2.30	2.4	104	2.4	104	0
TETRACHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
BENZENE	<0.50	2.00	2.1	105	2.2	110	5
TOLUENE	<0.50	2.00	2.2	110	2.3	115	4

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00414904

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/11/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/11/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-SP01-007	DATE ANALYZED	: 04/20/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	98
TOLUENE	101
CHLOROBENZENE	<1.0
ETHYLBENZENE	110
1,3-DICHLOROBENZENE	<1.0
1,2 AND 1,4-DICHLOROBENZENE	<1.0
XYLENES (TOTAL)	200
SURROGATE PERCENT RECOVERIES	
TRIFLUOROTOLUENE (%)	100

Analytical Technologies Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

		ATI I.D.	: 004149
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/20/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
TOLUENE	<0.50
CHLOROBENZENE	<0.50
ETHYLBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,2 AND 1,4-DICHLOROBENZENE	<0.50
XYLENES (TOTAL)	<1.0
SURROGATE PERCENT RECOVERIES	
TRIFLUOROTOLUENE (%)	105

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004149

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/16/90
PROJECT NAME	: SO CALIFORNIA CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00418105	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE	<0.50	10.0	11	114	11	111	3
TOLUENE	<0.50	10.0	10	101	11	110	8

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-914

ATI I.D. 004165

May 8, 1990

Camp Dresser & McKee Inc.
18881 VonKarmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O.: 34050

Attention: D. Chamberlin

On April 12, 1990, Analytical Technologies, Inc. received eight water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

TJF:bc

cc: E.E. Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc.

ATI I.D. 004165

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/ELCD	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/12/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM REPORT DATE : 05/08/90
ATI I.D. : 004165

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC-MW04A-007	WATER	04/12/90
02	SCC-MW10-007	WATER	04/12/90
03	SCC-MW06B-007	WATER	04/12/90
04	SCC-MW30-007	WATER	04/12/90
05	SCC-MW07-007	WATER	04/12/90
06	SCC-EB02-007	WATER	04/12/90
07	SCC-DIW01-007	WATER	04/12/90
08	SCC-TB03-007	WATER	04/12/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 004165

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
DATE RECEIVED : 04/12/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM
REPORT DATE : 05/08/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/L	130	195	90.0	205	450
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
NITRATE AS NITROGEN	MG/L	5.7	<0.05	9.4	<0.05	5.0

Date of analysis:

Chloride	**04/27/90**
Chromium Hexavalent	**04/13/90**
Nitrate as Nitrogen	**04/23/90**

Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 004165

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM

DATE RECEIVED : 04/12/90
REPORT DATE : 05/08/90

PARAMETER	UNITS	06	07
CHLORIDE	MG/L	5	<5
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02
NITRATE AS NITROGEN	MG/L	<0.05	<0.05

Date of analysis:

Chloride	04/27/90
Chromium Hexavalent	04/13/90
Nitrate as Nitrogen	04/23/90

Analytical Technologies Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM ATI I.D. : 004165

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00416603	30	30	0	65	40	88
CHROMIUM HEXAVALENT	MG/L	00415201	<0.02	<0.02	0	0.5	0.5	100
NITRATE AS NITROGEN	MG/L	00416505	5.0	5.0	0	12.0	8.0	88
NITRATE AS NITROGEN	MG/L	00416704	<0.05	<0.05	0	1.9	2.0	95

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical**Technologies,**Inc. METALS RESULTS

ATI I.D. : 004165

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/12/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM REPORT DATE : 05/08/90

PARAMETER	UNITS	01	02	03	04	05
CADMIUM	MG/L	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM	MG/L	<0.01	<0.01	0.02	<0.01	<0.01
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
ZINC	MG/L	<0.01	<0.01	<0.01	<0.01	<0.01

Date of analysis:

Cadmium	**04/23/90**
Chromium	**04/23/90**
Copper	**04/23/90**
Zinc	**04/23/90**

Analytical Technologies, Inc. METALS RESULTS

ATI I.D. : 004165

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM

DATE RECEIVED : 04/12/90
REPORT DATE : 05/08/90

PARAMETER	UNITS	06	07
CADMIUM	MG/L	<0.005	<0.005
CHROMIUM	MG/L	<0.01	<0.01
COPPER	MG/L	<0.02	0.04
ZINC	MG/L	0.02	<0.01

Date of analysis:

Cadmium	04/23/90
Chromium	04/23/90
Copper	04/23/90
Zinc	04/23/90

Analytical Technologies, Inc. METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM ATI I.D. : 004165

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00416507	<0.005	<0.005	0	2.0	2.0	100
CHROMIUM	MG/L	00416507	<0.01	<0.01	0	1.9	2.0	95
COPPER	MG/L	00416507	0.04	0.03	29	2.0	2.0	98
ZINC	MG/L	00416503	<0.01	<0.01	0	1.0	1.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416501

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW04A-007	DATE ANALYZED	: 04/22/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	2.7
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	80
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416502

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW10-007	DATE ANALYZED	: 04/22/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<5.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	4.9
1,2-DICHLOROETHANE	90
1,1-DICHLOROETHENE	5.6
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	200
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	93
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	70
TRIFLUOROTOLUENE (%)	87

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416503

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW06B-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	5.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	61
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<2.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	111
TRIFLUOROTOLUENE (%)	103

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416504

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW30-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	10
1,2-DICHLOROETHANE	120
1,1-DICHLOROETHENE	5
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	700
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	87
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<2.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
TRIFLUOROTOLUENE (%)	104

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416505

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW07-007	DATE ANALYZED	: 04/22/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<5.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	3.7
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	1.2
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	46
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	95
TRIFLUOROTOLUENE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416506

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-EB02-007	DATE ANALYZED	: 04/23/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	99

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416507

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-DIW01-007	DATE ANALYZED	: 04/23/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	91
TRIFLUOROTOLUENE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416508

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-TB03-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	1.4
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	3.6
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	1.4

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	89
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004165
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/21/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	84
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004165
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/22/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	0.88
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	86
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004165
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/23/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<1.0
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
TRIFLUOROTOLUENE (%)	113

AnalytiCal Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004165
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/26/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	0.40
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	103
TRIFLUOROTOLUENE (%)	112

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004165

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/20/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	SAMPLE MATRIX	: WATER
REF I.D.	: 00413505	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	1.4	70	1.7	85	19
CHLOROBENZENE	<0.50	2.00	2.2	110	2.4	120	9
1,1-DICHLOROETHENE	<0.20	2.00	2.2	110	2.3	115	4
TRICHLOROETHENE	<0.20	2.30	2.4	104	2.4	104	0
TETRACHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
BENZENE	<0.50	2.00	2.1	105	2.2	110	5
TOLUENE	<0.50	2.00	2.2	110	2.3	115	4

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004165

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/26/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	SAMPLE MATRIX	: WATER
REF I.D.	: 00416506	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.00	4.7	118	4.7	118	0
CHLOROBENZENE	<0.50	4.00	4.0	100	3.9	98	2
1,1-DICHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
TRICHLOROETHENE	<0.20	4.50	4.8	107	4.8	107	0
TETRACHLOROETHENE	<0.20	4.00	4.2	105	4.1	102	2
BENZENE	<0.50	4.00	4.1	102	4.1	102	0
TOLUENE	<0.50	4.00	4.2	105	4.2	105	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004165

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/27/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	SAMPLE MATRIX	: WATER
REF I.D.	: 00499921	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	20	20	100	21	105	5
CHLOROBENZENE	<0.50	20	21	105	21	105	0
1,1-DICHLOROETHENE	<0.20	20	19	95	19	95	0
TRICHLOROETHENE	<0.20	20	23	115	24	120	4
TETRACHLOROETHENE	<0.20	20	21	105	21	105	0
BENZENE	<0.50	20	23	115	23	115	0
TOLUENE	<0.50	20	23	115	23	115	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 004165

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 05/05/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	SAMPLE MATRIX	: WATER
REF I.D.	: 00429102	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.00	4.6	115	4.8	120	4
CHLOROBENZENE	<0.50	4.00	4.2	105	4.3	108	2
1,1-DICHLOROETHENE	<0.20	4.00	3.6	90	3.7	92	3
TRICHLOROETHENE	<0.20	4.50	4.9	109	4.9	109	0
TETRACHLOROETHENE	<0.20	4.00	4.2	105	4.2	105	0
BENZENE	<0.50	4.00	4.2	105	4.2	105	0
TOLUENE	<0.50	4.00	4.0	100	4.0	100	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 004184

May 4, 1990

Camp Dresser & McKee Inc.
18881 VonKarmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O.: 34050

Attention: Bill Grove

On April 13, 1990, Analytical Technologies, Inc. received four water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

TJF:bc

cc: E.E. Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670

AnalyticalTechnologies, Inc.

ATI I.D. 004184

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/ELCD	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/13/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEM REPORT DATE : 05/04/90
ATI I.D. : 004184

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC-MW08-007	WATER	04/13/90
02	SCC-MW09-007	WATER	04/13/90
03	SCC-MW05-007	WATER	04/13/90
04	SCC-TB04-007	WATER	04/13/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 004184

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
DATE RECEIVED : 04/13/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEM
REPORT DATE : 05/04/90

PARAMETER	UNITS	01	02	03
CHLORIDE	MG/L	160	250	85.0
CHROMIUM HEXAVALENT	MG/L	<0.02	0.80	<0.02
NITRATE AS NITROGEN	MG/L	4.7	3.5	6.6

Date of analysis:

Chloride	04/27/90
Chromium Hexavalent	04/13/90
Nitrate as Nitrogen	04/23/90

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEM ATI I.D. : 004184

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00418603	45.0	50.0	11	90	40	106
CHROMIUM HEXAVALENT	MG/L	00415201	<0.02	<0.02	0	0.5	0.5	100
NITRATE AS NITROGEN	MG/L	00418403	6.6	6.4	3	13.9	8.0	92

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 004184

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEM

DATE RECEIVED : 04/13/90
REPORT DATE : 05/04/90

PARAMETER	UNITS	01	02	03
CADMIUM	MG/L	<0.005	<0.005	<0.005
CHROMIUM	MG/L	<0.01	0.81	<0.01
COPPER	MG/L	<0.02	<0.02	<0.02
ZINC	MG/L	0.02	0.03	0.02

Date of analysis:

Cadmium	**04/26/90**
Chromium	**04/26/90**
Copper	**04/26/90**
Zinc	**04/26/90**

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEM ATI I.D. : 004184

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00418401	<0.005	<0.005	0	2.0	2.0	100
CHROMIUM	MG/L	00418401	<0.01	<0.01	0	1.9	2.0	95
COPPER	MG/L	00418401	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00418401	0.02	0.01	67	2.2	2.0	109

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00418401

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/13/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/13/90
PROJECT NAME	: SO CAL CHEM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW08-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	<1.0
BROMODICHLOROMETHANE	<0.40
BROMOFORM	<0.40
BROMOMETHANE	<0.40
CARBON TETRACHLORIDE	<0.40
CHLOROBENZENE	<1.0
CHLOROETHANE	<0.40
CHLOROFORM	<0.40
CHLOROMETHANE	<0.40
DIBROMOCHLOROMETHANE	<0.40
1,2-DICHLOROBENZENE	<1.0
1,3-DICHLOROBENZENE	<1.0
1,4-DICHLOROBENZENE	<1.0
DICHLORODIFLUOROMETHANE	<0.40
1,1-DICHLOROETHANE	28
1,2-DICHLOROETHANE	0.80
1,1-DICHLOROETHENE	2.7
1,2-DICHLOROETHENE (TOTAL)	5.3
1,2-DICHLOROPROPANE	<0.40
CIS-1,3-DICHLOROPROPENE	<0.40
TRANS-1,3-DICHLOROPROPENE	<0.40
ETHYLBENZENE	<1.0
METHYLENE CHLORIDE	<4.0
1,1,2,2-TETRACHLOROETHANE	<0.40
TETRACHLOROETHENE	1.0
TOLUENE	<1.0
1,1,1-TRICHLOROETHANE	<0.40
1,1,2-TRICHLOROETHANE	<0.40
TRICHLOROETHENE	17
TRICHLOROFLUOROMETHANE	<4.0
VINYL CHLORIDE	<0.40
XYLENES (TOTAL)	<4.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	101
TRIFLUOROTOLUENE (%)	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00418402

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/13/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/13/90
PROJECT NAME	: SO CAL CHEM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW09-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	13
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	89
1,2-DICHLOROETHANE	15
1,1-DICHLOROETHENE	48
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	2
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	4
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	150
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<2.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	114
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00418403

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/13/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/13/90
PROJECT NAME	: SO CAL CHEM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW05-007	DATE ANALYZED	: 04/23/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	120
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	76
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	4.7
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	24
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	93
TRIFLUOROTOLUENE (%)	93

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00418404

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/13/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/13/90
PROJECT NAME	: SO CAL CHEM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-TB04-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	1.9
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	0.8
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	11
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<0.50
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	3.6

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	105
TRIFLUOROTOLUENE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004184
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/26/90
PROJECT NAME	: SO CAL CHEM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	5.2
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<0.50
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<0.50

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	102
TRIFLUOROTOLUENE (%)	91

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 004184
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/22/90
PROJECT NAME	: SO CAL CHEM	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	0.40
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	86
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004184

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/27/90
PROJECT NAME	: SO CAL CHEM	SAMPLE MATRIX	: WATER
REF I.D.	: 00499921	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	20	20	100	21	105	5
CHLOROBENZENE	<0.50	20	21	105	21	105	0
1,1-DICHLOROETHENE	<0.20	20	19	95	19	95	0
TRICHLOROETHENE	<0.20	20	23	115	24	120	4
TETRACHLOROETHENE	<0.20	20	21	105	21	105	0
BENZENE	<0.50	20	23	115	23	115	0
TOLUENE	<0.50	20	23	115	23	115	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 004184

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 04/29/90
PROJECT NAME	: SO CAL CHEM	SAMPLE MATRIX	: WATER
REF I.D.	: 00421904	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	2.00	2.4	120	2.4	120	0
CHLOROBENZENE	<0.50	2.00	2.3	115	2.3	115	0
1,1-DICHLOROETHENE	<0.20	2.00	2.1	105	2.1	105	0
TRICHLOROETHENE	<0.20	2.00	2.4	120	2.4	120	0
TETRACHLOROETHENE	<0.20	2.00	2.2	110	2.2	110	0
BENZENE	<0.50	2.00	2.1	105	2.0	100	5
TOLUENE	<0.50	2.00	2.2	110	2.2	110	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 004165

May 18, 1990

MAY 2 1 1990

Camp Dresser & McKee Inc.
18881 VonKarmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O.: 34050

Attention: D. Chamberlin

Enclosed is an amended data sheet for halogenated/aromatic volatiles, reflecting a change for ethylbenzene.

We apologize for any inconvenience this may have caused you.

Timothy J. Fitzpatrick
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

TJF:bc

cc: E.E. Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 04/12/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SO CAL CHEMICAL/CDM REPORT DATE : 05/18/90
ATI I.D. : 004165

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC-MW04A-007	WATER	04/12/90
02	SCC-MW10-007	WATER	04/12/90
03	SCC-MW06B-007	WATER	04/12/90
04	SCC-MW30-007	WATER	04/12/90
05	SCC-MW07-007	WATER	04/12/90
06	SCC-EB02-007	WATER	04/12/90
07	SCC-DIW01-007	WATER	04/12/90
08	SCC-TB03-007	WATER	04/12/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00416504

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 04/12/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 04/12/90
PROJECT NAME	: SO CAL CHEMICAL/CDM	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC-MW30-007	DATE ANALYZED	: 04/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	10
1,2-DICHLOROETHANE	120
1,1-DICHLOROETHENE	5
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	180
METHYLENE CHLORIDE	<10.
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	87
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<2.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
TRIFLUOROTOLUENE (%)	104

APPENDIX D

WCAS ANALYTICAL REPORTS

April 17, 1990

APR 1 8 1990

SOUTHERN CALIFORNIA CHEMICAL
8851 Dice Road
Santa Fe Springs, CA 90670

Attn: Ed Vigil

JOB NO. 15239

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

A

LABORATORY REPORT

Samples Received: Three (3) Liquid Samples
Date Received: 4-11-90
Purchase Order No: 34051

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
One (1) liquid	Volatile Aromatics by EPA 602	Data Sheet
One (1) liquid	Selected Metals by ICPMS	Table I
One (1) liquid	Hexavalent Chromium by EPA 7196/IC	Table II

cc: Camp, Dresser & McKee
Attn: D. Chamberlin

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

SOUTHERN CALIFORNIA CHEMICAL
Mr. Ed Vigil

Job # 15239
April 17, 1990

LABORATORY REPORT

TABLE I

Parts Per Billion (ug/L)

Total Metals

Selected Metals by ICPMS

Sample ID	Cadmium	Chromium	Copper	Zinc
#3	0.50	4.5	1.4	2.7
Detection Limit	0.001	0.01	0.001	0.009

Date Analyzed: 4-16-90

TABLE II

Parts Per Million (mg/L)

Sample ID	Hexavalent Chromium by EPA 7196/IC
#2	0.94
Detection Limit	0.001

Date Analyzed: 4-12-90

Client: SOUTHERN CALIFORNIA CHEMICAL
Job No: 15239
Date Analyzed: 12-Apr-90
Analysis: EPA 602 (8020)

Sample: #1
Matrix: Water
Samp Amt: 0.5 ml
Dil Fact: 1

Compound	Concentration ug/L	Detection Limits
Benzene	84	2
Toluene	75	2
Chlorobenzene	ND	5
Ethylbenzene	72	2
Total Xylenes	142	2
1,3-Dichlorobenzene	ND	2
1,4-Dichlorobenzene	ND	2
1,2-Dichlorobenzene	ND	2

ND-Not Detected. The limit of detection is reported above.

Appendix E

Appendix E

APPENDIX E

COMPLETED COC FORMS

004134

CHAIN OF CUSTODY RECORD

PROJECT NAME So Cal Chemical

Camp Dresser & McKee Inc. **CDM**

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. 2

	SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	EXTR. ORG.	VOA 601/602	PEST./PCB	TRACE METALS*	Cr+6	Chloride	Nitrate	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
01	SCC-	MW01-007		10Apr90	0920	well MW01	Water		X						2		40ml VOA
	↓	↓									X	X	X		2		500ml poly
	↓	↓		↓	↓	↓								X	1		120ml poly
05	SCC-	TBØ1-007		10Apr90	–	Travel Blank			X						2		40ml VOA
	SCC-	MWØ2-007			1350	well MW02			X						2		40ml VOA
	↓	↓			↓	↓					X	X	X		2		500ml poly
02	↓	↓			↓	↓								X	1		120ml poly
	SCC-	MW11-007			1545	well MW11			X						2		40ml VOA
	↓	↓			↓	↓					X	X	X		2		500ml poly
03	↓	↓			↓	↓								X	1		120ml poly
	SCC-	~~MW~~ EBØ1-	007		1620				X						2		40ml VOA
	↓	↓	↓		↓						X	X	X		2		500ml poly
04	↓	↓	↓		↓		↓							X	1		120ml poly

BG

Please - Put the date analyzed by each sample when data results are reported to CDM & So. Cal Chem.

* Trace Metals include Cu, Cr(T), Zn, Cd * filter metals in lab per 4/11/90 Cd per this per previous testing (Monitoring) see incoming Prj. sheet MW — Bill Grove 4/11/90 PR

SAMPLED BY (SIGN) B Grove, Emily L. [illegible]

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B Grove	②	③	④	⑤ [signature]
DATE/TIME (10Apr90 1842)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (4-10-90 / 8:30)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① [signature]	②	③	④	⑤
DATE/TIME (4-10-90 / 1842)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express Curriers		Marian VanDerhoz	(4/11/90, 8:30)

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

CDM

PROJECT NAME S. Cal Chemical

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. 2

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA	PEST./PCB	TRACE METALS	Cr+6	Chloride	Nitrate	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC	MW03-007	01	11Apr90	0945	Well MW03	Water		X						2		40ml VOA
										X	X	X		2		500ml poly
													X	1		120ml poly
SCC	TB02-007	05	11Apr90	—	Travel blank	water		X						1		40ml VOA
SCC	MW04-007			EW 1425	Well MW04			X						2		40ml VOA
		02								X	X	X		2		500 ml poly
													X	1		120ml poly
SCC	MW31-007		11Apr90	1825	Well #MW31	water		X						2		40ml VOA
		03								X	X	X		2		500ml poly
													X	1		120ml poly
SCC	SF01-007		11Apr90	1210	[redacted]	WATER							X	2		40ml VOA
		04								X				1		500ml poly
											X			1		500ml poly
NOTE	Lab Please filter metals															
NOTE:	Please put the date analyzed by each sample for all analyses which data results are reported to CDM & So Cal Chem.															
*	Trace metals include Cu, Cr(T), Zn & Cl *					* All VOA are 601/602 unless otherwise Noted *										

SAMPLED BY (SIGN) Emily L. Weyand

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① DATE/TIME (6 h / 11 Apr 90	② DATE/TIME (/)	DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME 4/11 1618-55
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① DATE/TIME (4/11 9,1)	② DATE/TIME (/)	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express		Christina Tinto	(4/11/90, 20.05)

004165

Pg 1 of 2

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME S. Calif. Chemical

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. 2

	SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	EXTR. ORG.	VOA w/ [illegible]	PEST./PCB	TRACE METALS*	Cr+6	Chloride	Nitrate	[illegible]		NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
01	SCC	MW04A	007	12Apr90	0930	Well MW04A	Water		X								2		40ml VOA
	↓	↓	↓	↓	↓	↓	↓				X	X	X				2		500ml poly
	↓	↓	↓	↓	↓	↓	↓							X			1		120ml poly
02	SCC	MW10	007	12Apr90	0940	Well MW10	↓		X								2		40ml VOA
	↓	↓	↓	↓	↓	↓	↓				X	X	X				2		500ml poly
	↓	↓	↓ (EW)	↓	↓	↓	↓							X			1		120ml poly
03	SCC	MW06B	~~1415~~ 007	↓	1415	Well MW06B	↓		X								2		40ml VOA
	↓	↓	↓	↓	↓	↓	↓				X	X	X				2		500ml poly
	↓	↓	↓	↓	↓	↓	↓							X			1		120ml poly
04	SCC	MW30	007	↓	0800	Well MW30	↓		X								2		40ml VOA
	↓	↓	↓	↓	↓	↓	↓				X	X	X				2		500ml poly
	↓	↓	↓	↓	↓	↓	↓							X			1		120ml poly
05	↓	MW07	↓	↓	~~18~~ 1700 (EW)	Well MW07	↓		X								2		40ml VOA
	↓	↓	↓	↓	↓	↓	↓				X	X	X				2		500ml poly
	↓	↓	↓	↓	↓		↓							X			1		120ml poly
08	↓	TB03	↓	↓	—	Travel Blank	↓		X								1		40ml VOA

NOTE: Please put the date analyzed by each sample for all analyses when data results are reported to CDM & SCC — * TRACE METALS INCLUDE Cu, Co, Cr (Total) & Zn *

SAMPLED BY (SIGN) Emily L. Degard, B. Grove

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① [signature]	② [signature]	③	④	⑤
DATE/TIME (12 Apr 90 5:55 pm)	DATE/TIME 4-12-90 / 7:50 P	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)
RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)
① [signature]	②	③	④	⑤
DATE/TIME (4-12-90 5:55p)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi-Express Courier		Marian VanDerhoof	(4/12/90 / 7:50)

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. Pg 282 **CDM**

PROJECT NAME S. Calif. Chemical

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. 2

	SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	EXTR. ORG.	VOA	PEST./PCB	TRACE METALS*	Cr+6	Chloride	Nitrate		NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
	SCC	EB02	007	12Apr90	1500	———	Water		X							2		40ml VOA
06	↓	↓	↓	↓	↓		↓			NO	X	X	X			2		500ml poly
	↓	↓	↓	↓	↓		↓							X		1		120ml poly
	SCC	DIW01	001	↓	0900	———	↓		X							2		40ml VOA
07	↓	↓	↓	↓	↓		↓				X	X	X			2		500ml poly
	↓	↓	↓	↓	↓		↓							X		1		120ml poly

NOTE: Please put the date analyzed by each sample for all analyses when data results are reported to CDM & SCC

*TRACE METALS INCLUDE Cr (T), Cu, Zn, Ca

SAMPLED BY (SIGN) Emily L. Weyand [signature]

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① [signature]	② [signature]	③	④	⑤
DATE/TIME 12Apr90 555pm	DATE/TIME 4/12/90 7:50p	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)
RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)	RECEIVED BY (SIGN)
① [signature]	②	③	④	⑤
DATE/TIME (4/12/90 555p	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express Courier		Marian Van Der Hoof	(4/12/90, 7:50)

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

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Pg 1 of 1

CHAIN OF CUSTODY RECORD

CDM

Camp Dresser & McKee Inc.

PROJECT NAME Solal Chem

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. 2

	SAMPLE NUMBER		DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA 601	PEST./PCB	*TRACE METALS Cr+6, Cl- Alkalinity	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
04	SCC -	TB04 -	007	13Apr90	—	Travel Blank	water	X			1		40ml VOA
	SCC -	MW08 -	007		0915	well MW08		X			2		40ml VOA
01									X X		2		500ml Poly
										X	1		120ml poly
	SCC -	MW09 -	007		1315	well MW09		X			2		40ml VOA
02									X X		2		500ml Poly
										X	1		120ml poly
	SCC -	MW05 -	007		1325	Well MW05		X			2		40ml VOA
03									X X		2		500ml Poly
										X	1		120ml poly

Please put the date analyzed by each sample for all analyses when the data is reported to SCC & CDM

* Trace metals include Cu, Cr(T), Cd, Zn and have been field filtered 0.45um

Copies: Ship with Samples

LEGEND: Original: Return to Sample Traffic Control Center

SAMPLED BY (SIGN) [signature], Emily L. Degnan

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① [signature] DATE/TIME 13Apr90 1630	② 4/13/90 1700 DATE/TIME (/)	[signature] DATE/TIME (4/13/90 2151)	④ DATE/TIME (/)	⑤ DATE/TIME (/)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① [signature] DATE/TIME 13/490 1639	② 4/13/90 1700 DATE/TIME [signature]	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Red-Express Courier		Marian VanDerhoof	(4/13/90 9:51)